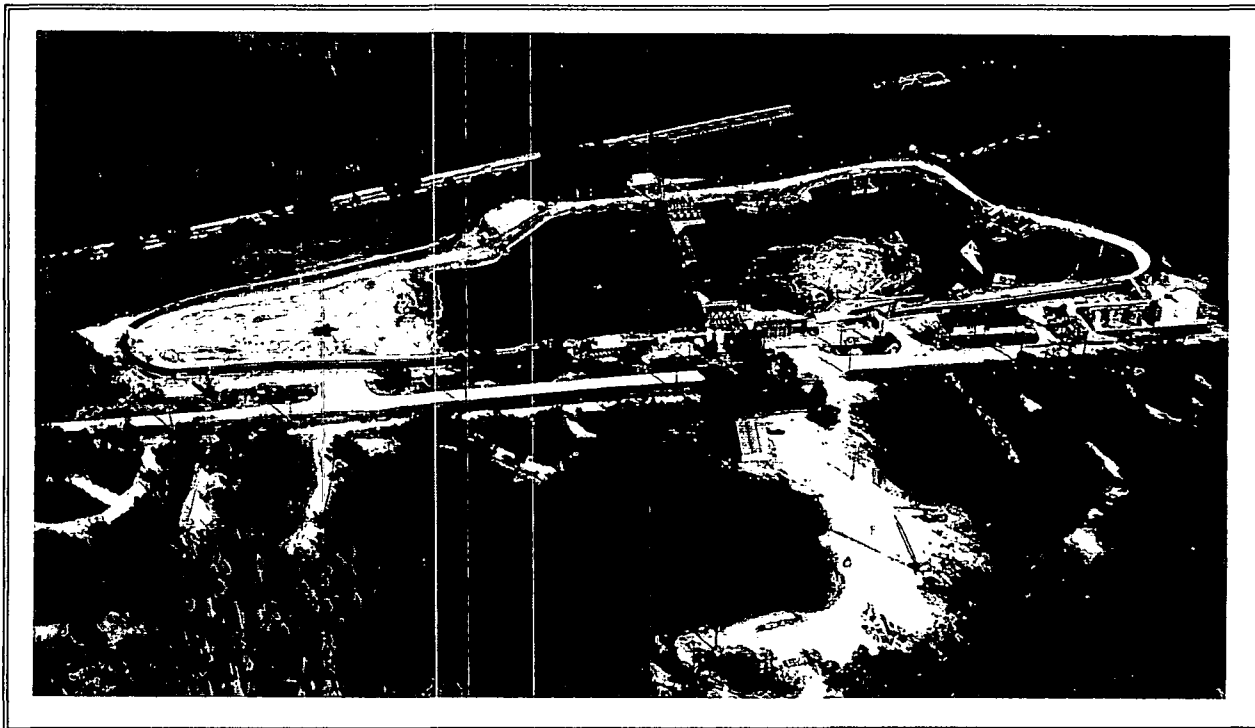


French Ltd. Project



FLTG, Inc.
Crosby, Texas

MONTHLY PROGRESS REPORT



Submitted to:

U.S. Environmental Protection Agency - Region 6
and
Texas Natural Resource Conservation Commission

April, 1995



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8A Repository Status Report: April, 1995

LIST OF APPENDICES

Appendix A - None

Appendix B - None

Appendix C - Analytical Results -

Samples Dated April, 1995

<u>Project I.D.</u>	<u>Date Received</u>	<u>Project I.D.</u>	<u>Date Received</u>
M04A0029	4/03/95	S16B0031	4/13/95
M08C0011	4/03/95	M03A0320	4/14/95
M03A0317	4/04/95	M04C0026	4/18/95
M04A0030	4/04/95	M03A0321	4/19/95
M04B0027	4/04/95	M03A0322	4/27/95
M04C0019	4/04/95	M03A0323	4/28/95
M03A0318	4/05/95	M04A0031	4/28/95
M08A0020	4/05/95	M04A0032	4/28/95
M08B0008	4/05/95	M04B0029	4/28/95
M04B0028	4/06/95	M04B0030	4/28/95
M04C0020	4/06/95	M04B0031	4/28/95
M08D0014	4/06/95	M04C0021	4/28/95
M03A0319	4/12/95	M04C0024	4/28/95

1.0 INTRODUCTION

This report covers the activities of FLTG, Inc. and the French Limited Project for April, 1995. FLTG, Inc. manages the project for the French Limited Task Group of Potentially Responsible Parties.

During April, 1995, the project team focused on the following activities and issues:

- Health, Safety, and Quality.
- Safety awareness.
- Contractor safety.
- HAZOP of daily work assignments.
- Detecting and correcting work place hazards.
- Vegetation evaluation in Cell E.
- Operation and maintenance of the aquifer remediation system.
- In-situ aquifer bioremediation.
- Lease Waitkus property south of Gulf Pump Road.
- Water treatment plant operation and maintenance.
- Operation of the data base management system.
- Wetlands project construction.
- This report includes:
 - A summary of April activities, issues, and progress.

- Lagoon area maintenance.
- Groundwater and Subsoil Remediation activities, issues, and progress.
- Groundwater Treatment Plant activities and issues.
- Ambient Air Management status.
- QA/QC status and data.
- Site management activities and issues.
- Wetlands restoration activities, issues, and progress.

2.0 SUMMARY

2.1 Summary of Activities and Progress

2.1.1 Health and Safety

An operator cut his hand on a vacuum pump moisture trap; no medical attention was required.

There were no equipment damage incidents.

All site workers earned the April safety bonus.

Conducted safety meetings and job inspections at the start of each shift; reviewed safety issues before starting all jobs.

All employees and contractors attended daily safety meetings.

Conducted daily mini-HAZOP of all specific jobs.

Supervision made 205 specific on-the-job safety contacts.

Emphasized the causes, symptoms, and treatment of heat stress.

Inspected and certified all fire extinguishers.

Emphasized the hazards and precautions associated with working around moving equipment.

Conducted 22 specific health and safety inspections.

Logged all safety issues each shift; less than 24-hour response to all safety issues.

The daily raffle ticket safety awareness program has been effective in maintaining daily safety awareness among all site personnel and contractors.

Conducted personnel exposure monitoring, and all results were within acceptable levels. The most recent results are in Table 2-1.

2.1.2 Quality/QAQC/Data Base Management

The total quality process was used. The status of the goals is shown on Table 2-2.

The agencies had no comments on the 1994 Annual QAQC Report.

Raw data is being validated as per the plan.

The data base management system operated with no problems or delays.

There were no data or reports rejected due to errors.

American Analytical continued to provide data on time.

2.1.3 Lagoon

Received lagoon completion certification from the EPA.

Maintained a high level of biological activity in Cell D; OUR and HMB were high. Added O₂ to Cell D using a downdraft aerator for six days.

Continued periodic subsurface injection of Cell D water in Cell E; there were no problems or issues, and adequate gradient control was maintained.

Continued evaluation of various tree and bush species for passive dewatering of the subsurface inside the floodwall.

Tested floodwall gate closure.

2.1.4 Ambient Air Management

Ambient air quality was manually checked daily with portable analyzers, and no response action was required.

Air quality was continuously monitored in all potential exposure areas and on all special jobs.

Time-integrated samples were collected in three work areas, and the results indicated no exposure; the data is shown in Table 2-1.

2.1.5 Aquifer Remediation

Monitored status of DNAPL plumes.

Continued routine S1 and INT oxygen and nutrient injection.

Continued to evaluate ways to increase INT remediation rates in the INT-11 wall area and the SW area.

Installed three new INT pumping wells in critical areas.

Flows continued to increase in the sand fracture areas.

Operated vacuum-enhanced pumping systems for INT wells; plan to vacuum enhance two of the three new INT pumping wells.

Issued weekly well status and performance reports.

Inspected and adjusted all wells each day.

Continued daily maintenance of recovery and injection wells.

Completed monthly well measurements and sampling; TOC levels continue to decrease; DO levels continue to increase.

Maintained O₂ content of injection water at about 40-45 ppm.

Shut off 8 more production or injection wells in areas that have reached aquifer remediation shut-off criteria; monthly sampling indicated no rebound and indicated favorable gradient control.

2.1.6 Groundwater Treatment

The treated water did not require carbon treatment to maintain effluent criteria.

There was no downtime.

Submitted a refinement notice to increase the effluent criteria for Ba from 200 ppb to 1,000 ppb.

The water treatment plant effluent data is shown in Table 2-3. All effluent samples met criteria.

TOC input to T-101 continued to decrease.

The process operators collected all the process water and ground water samples.

2.1.7 Wetlands Restoration

Dewatering was required after every rainfall.

Continued final grading and topsoil replacement in selected areas.

Continued excavation of flow channels; relatively dry weather allowed good progress on site excavation.

Continued construction of the bridges.

Completed the fresh water ponds on the islands.

Reviewed status, progress, and issues with the TNRCC.

Started selective planting.

Conducted site tour for Baytown officials.

2.1.8 Site Management and Issues

Used the on-site laboratory to process all the operational control samples.

Reviewed site progress and issues in detail with EPA and TNRCC on a regular basis.

Validated all analytical data as per the QAQC plan.

Reviewed project status and issues each day to ensure focus on critical issues - safety, quality, cost, INT zone progress, and wetlands construction.

Issued weekly cost, schedule, and maintenance reports.

Reviewed progress on issues and action plans each week.

Reduced aquifer remediation operational and maintenance requirements.

Reduced technical support MH's.

Evaluated site security requirements.

Implemented project manpower reduction plan.

TABLE 2-1

Ambient Air Management
Time Integrated Exposure Data

Compound	PEL 8 hour PPM	1 12-Apr-95 Maint. (F.L.)		2 12-Apr-95 WTP Oper (E.O.)		3 12-Apr-95 WTP Oper (C.A.)	
		% of PEL	PPM	% of PEL	PPM	% of PEL	PPM
Chloromethane	50	0.000	0.000	0.003	0.001	0.001	0.001
Bromomethane	5	0.000	0.000	0.004	0.000	0.002	0.000
Vinyl chloride	1	0.000	0.000	0.000	0.000	0.000	0.000
Chloroethane	1000	0.000	0.000	0.000	0.000	0.000	0.000
Dichloromethane	50	0.001	0.000	0.007	0.003	0.002	0.001
Acetone	750	0.002	0.012	0.001	0.010	0.002	0.015
Carbon disulfide	10	0.000	0.000	0.000	0.000	0.000	0.000
1,1-Dichloroethene	5	0.037	0.002	0.000	0.000	0.000	0.000
1,1-Dichloroethane	100	0.000	0.000	0.000	0.000	0.000	0.000
trans-1,2-Dichloroethane	200	0.000	0.000	0.001	0.003	0.000	0.001
Chloroform	10	0.003	0.000	0.028	0.003	0.053	0.005
1,2-Dichloroethane	10	0.002	0.000	0.020	0.002	0.035	0.003
2-Butanone	200	0.022	0.043	0.002	0.004	0.004	0.008
1,1,1-Trichloroethane	350	0.010	0.037	0.000	0.001	0.001	0.002
Carbon Tetrachloride	5	0.003	0.000	0.030	0.002	0.111	0.006
Vinyl acetate	10	0.002	0.000	0.000	0.000	0.005	0.000
Bromodichloromethane			0.000		0.000		0.000
1,2-Dichloropropane	75	0.000	0.000	0.000	0.000	0.000	0.000
cis-1,3-Dichloropropen	1	0.000	0.000	0.000	0.000	0.000	0.000
Trichloroethene	50	0.000	0.000	0.000	0.000	0.000	0.000
Dibromochloromethane			0.000		0.000		0.000
1,1,2-Trichloroethane	10	0.000	0.000	0.000	0.000	0.000	0.000
Benzene	1	0.086	0.001	0.112	0.001	0.178	0.002
trans-1,3-Dichloroprop	1	0.000	0.000	0.000	0.000	0.000	0.000
2-Chloroethylvinyl ether			0.000		0.000		0.000
Bromoform	0.5	0.000	0.000	0.000	0.000	0.000	0.000
4-Methyl-2-pentanone	50	0.000	0.000	0.000	0.000	0.001	0.001
2-Hexanone	5	0.000	0.000	0.000	0.000	0.004	0.000
Tetrachloroethene	50	0.000	0.000	0.001	0.000	0.007	0.003
1,1,2,2-Tetrachloroet	1	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	100	0.000	0.000	0.001	0.001	0.002	0.002
Chlorobenzene	10	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	100	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	50	0.000	0.000	0.000	0.000	0.000	0.000
Xylene (total)	100	0.000	0.000	0.000	0.000	0.001	0.001
Hexane			0.001		0.002		0.003

TABLE 2-2

Project Quality

Status as of
04/30/95

Goals

Yes	1)	No OSHA recordable injuries.
Attention	2)	100% compliance with all safety rules and procedures.
Yes	3)	No citations for violations of applicable, relevant and appropriate regulations.
Yes	4)	100% attendance (including subcontractors) at daily safety meetings.
Attention	5)	Less than 24-hour response time on health and safety issues.
Yes	6)	100% sign-in and security clearance.
Yes	7)	No invalidation of reported data due to QA/QC issues.

8) Spend less than:

MH/Month

Yes	• Direct hire	3,000
Yes	• FLTG management	700
Yes/Attention	• Technical support (3 people)	600
Yes	• Maintenance support	120

Yes	9)	Pump at least 90 gpm; inject at least 60 gpm.
Yes	10)	Remediate shallow alluvial zone aquifer in 60 months.
Yes	11)	Hold analytical cost to less than \$20,000 per month (1994 only).
Yes	12)	No unscheduled overtime (per day or per week).
Yes	13)	No agency contacts which require 3rd party resolution.
Yes	14)	Documented training of site personnel for all work assignments.
Yes	15)	Weekly audit of actual performance versus goals.

MONTHLY PROGRESS REPORT
Summary

French Ltd. Project
FLTG, Incorporated

TABLE 2-3
Treated Water Results Summary

Collected	Set No.	pH		TSS		TOC		O&G		Benzene		Chlor HC's		Total PCBs		Naphthalene	
		(6-9)		5 PPM		55 PPM		15 PPM		150 PPB		500 PPB		0.65 PPB		300 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Jan-95	M03A0296	7.78		4.		12.9		2.5		5.		275.		.16		5.	
6-Jan-95	M03A0297	7.81		5.		19.		2.5		6.		249.		.16		5.	
9-Jan-95	M03A0298	7.8		7.		9.8		2.5		2.5		124.		.16		5.	
12-Jan-95	M03A0299	7.77		2.		9.8		2.5		2.5		200.		.16		5.	
18-Jan-95	M03A0300	7.61		4.		18.3		2.5		6.		393.		.16		5.	
19-Jan-95	M03A0301	7.44		2.		19.8		2.5		5.		454.		.16		5.	
23-Jan-95	M03A0302	7.82		9.		35.5		2.5		6.		192.		.16		5.	
26-Jan-95	M03A0303	7.66		.5		20.5		2.5		6.		234.		.16		5.	
30-Jan-95	M03A0304	7.15	7.6	4.	4.2	44.3	21.1	2.5	2.5	25.	7.1	2326.	494	.16	.16	5.	5.
2-Feb-95	M03A0305	7.28	7.6	.5	3.8	11.7	21.	2.5	2.5	6.	7.2	613.	532	.16	.16	5.	5.
6-Feb-95	M03A0306	7.55	7.6	1.	3.3	11.7	20.2	2.5	2.5	5.	7.1	411.	550	.16	.16	5.	5.
9-Feb-95	M03A0307	7.52	7.5	5.	3.1	8.8	20.	2.5	2.5	5.	7.4	226.	561	.16	.16	5.	5.
13-Feb-95	M03A0308	7.5	7.5	22.	5.3	9.7	20.	2.5	2.5	5.	7.7	349.	578	.16	.16	5.	5.
16-Feb-95	M03A0309	7.33	7.5	.5	4.9	5.2	18.6	2.5	2.5	5.	7.6	276.	565	.16	.16	5.	5.
20-Feb-95	M03A0310	7.37	7.5	6.	5.4	5.8	17.	2.5	2.5	4.	7.4	193.	536	.16	.16	5.	5.
23-Feb-95	M03A0311	7.29	7.4	1.	4.5	1.	13.2	2.5	2.5	2.5	7.1	60.	521	.16	.16	5.	5.
27-Feb-95	M03A0312	7.46	7.4	3.	4.8	9.5	12.	2.5	2.5	2.5	6.7	164.	513	.16	.16	5.	5.
2-Mar-95	M03A0313	7.47	7.4	.5	4.4	8.5	8.	2.5	2.5	2.5	4.2	145.	271	.16	.16	5.	5.
6-Mar-95	M03A0314	7.49	7.4	1.	4.4	8.1	7.6	2.5	2.5	2.5	3.8	128.	217	.16	.16	5.	5.
9-Mar-95	M03A0315	7.38	7.4	1.	4.4	8.	7.2	2.5	2.5	2.5	3.5	193.	193	.16	.16	5.	5.
13-Mar-95	M03A0316	7.64	7.4	5.	4.4	7.2	7.	2.5	2.5	2.5	3.22	111.	180	.16	.16	5.	5.
16-Mar-95	M03A0317	7.55	7.4	.5	2.1	6.	6.6	2.5	2.5	2.5	2.9	150.	158	.16	.16	5.	5.
20-Mar-95	M03A0318	7.41	7.5	.5	2.1	6.6	6.7	2.5	2.5	2.5	2.7	97.	138	.16	.16	5.	5.
23-Mar-95	M03A0319	7.45	7.5	1.	1.5	6.	6.8	2.5	2.5	2.5	2.5	185.	137.	.16	.16	5.	5.
27-Mar-95	M03A0320	7.83	7.5	3.	1.7	12.2	8.	2.5	2.5	6.	2.9	325.	166	.16	.16	5.	5.
30-Mar-95	M03A0321	7.47	7.5	7.	2.2	11.9	8.3	2.5	2.5	6.	3.3	342.	186	.16	.16	5.	5.
3-Apr-95	M03A0322	7.42	7.5	1.	2.2	11.7	8.6	2.5	2.5	6.	3.7	269.	200	.16	.16	5.	5.
6-Apr-95	M03A0323	7.45	7.5	2.	2.3	12.2	9.1	2.5	2.5	6.	4.1	239.	212	.16	.16	5.	5.
10-Apr-95	M03A0324	7.38	7.5	2.	2.4	11.1	9.4	2.5	2.5	6.	4.4	230.	216	.16	.16	5.	5.
13-Apr-95	M03A0325	7.62	7.5	3.	2.2	12.9	10.1	2.5	2.5	6.	4.8	384.	245	.16	.16	5.	5.
17-Apr-95	M03A0326	7.59	7.5	11.	3.4	12.9	10.8	2.5	2.5	6.	5.2	247.	255	.16	.16	5.	5.
20-Apr-95	M03A0327	7.75	7.55	1.	3.4	12.1	11.4	2.5	2.5	6.	5.6	226.	270	.16	.16	5.	5.
24-Apr-95	M03A0328	7.67	7.58	13.	4.8	13.	12.2	2.5	2.5	6.	6.	269.	279.	.16	.16	5.	5.
27-Apr-95	M03A0329	7.51	7.54	1.	4.6	12.2	12.2	2.5	2.5	2.5	5.6	236.	269	.16	.16	5.	5.
1-May-95	M03A0330	7.63	7.56														

Chlorinated hydrocarbons value is the sum of detected concentrations of 21 volatile chlorinated hydrocarbons on target compound list.

MONTHLY PROGRESS REPORT
Summary

French Ltd. Project
FLTG, Incorporated

TABLE 2-3 (Continued)
Treated Water Results Summary

Collected	Set No.	As		Ba		Cd		Cr		Cu		Pb		Mn		Hg		Ni		Se		Ag		Zn	
		150 PPB		1000 PPB		50 PPB		500 PPB		15 PPB		66 PPB		300 PPB		1 PPB		148 PPB		20 PPB		5 PPB		162 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Jan-95	M03A0296	9.9		172.		.1		2.1		1.6		.5		18.		.1		1.		1.2		.2		7.	
5-Jan-95	M03A0297	14.		151.		.1		3.		2.		.5		57.		.1		6.		1.2		.2		20.	
9-Jan-95	M03A0298	12.		171.		.1		.9		3.		.5		23.		.1		4.		1.3		.2		7.	
12-Jan-95	M03A0299	16.		143.		.1		.2		2.		.5		2.		.1		2.		1.3		.2		3.	
16-Jan-95	M03A0300	12.		146.		.1		.6		3.		.5		1.		.1		3.		1.3		.2		6.	
19-Jan-95	M03A0301	18.		135.		.1		.4		2.		.5		2.		.1		4.		1.3		.2		18.	
23-Jan-95	M03A0302	12.		140.		.1		.2		2.		.5		3.		.1		6.		1.3		.2		16.	
26-Jan-95	M03A0303	16.		148.		.1		.2		2.		.5		2.		.1		2.		1.3		.2		12.	
30-Jan-95	M03A0304	9.		238.		.1		.2		2.		.5		43.		.1		3.		1.3		.2		5.	
2-Feb-95	M03A0305	10.	13.2	192.	163	.1	.1	1.	.7	2.	2.2	.5	.5	15.	16.4	.1	.1	4.	3.8	1.3	1.2	.2	.2	8.	10.6
6-Feb-95	M03A0306	11.	12.9	188.	167	.1	.1	.2	.4	1.	2.1	.5	.5	4.	10.6	.1	.1	2.	3.3	1.3	1.3	.2	.2	5.	8.9
9-Feb-95	M03A0307	16.	13.3	195.	169	.1	.1	.2	.3	4.	2.2	.5	.5	6.	8.7	.1	.1	6.	3.6	1.3	1.3	.2	.2	11.	9.3
13-Feb-95	M03A0308	13.	13.	184.	174	.1	.1	2.	.5	1.	2.1	.5	.5	15.	10.1	.1	.1	5.	3.9	1.3	1.3	.2	.2	8.	9.9
16-Feb-95	M03A0309	12.	13.	184.	178	.1	.1	.2	.5	1.	1.9	.5	.5	6.	10.7	.1	.1	6.	4.2	1.3	1.3	.2	.2	7.	10.
20-Feb-95	M03A0310	14.	12.6	191.	184	.1	.1	2.	.7	2.	1.9	.5	.5	27.	13.4	.1	.1	8.	4.7	1.3	1.3	.3	.2	6.	8.7
23-Feb-95	M03A0311	13.	12.7	165.	187	.1	.1	1.	.8	2.	1.9	.5	.5	3.	13.4	.1	.1	8.	4.9	1.3	1.3	.2	.2	9.	7.9
27-Feb-95	M03A0312	22.	13.3	144.	187	.1	.1	4.5	1.2	3.	2.	.5	.5	3.	13.6	.1	.1	12.	6.	1.3	1.3	.5	.2	2.5	6.8
2-Mar-95	M03A0313	23.	14.9	133.	175	.1	.1	2.	1.4	1.	1.9	.5	.5	15.	10.4	.1	.1	8.	6.6	1.3	1.3	.5	.2	6.	6.9
6-Mar-95	M03A0314	17.	15.7	130.	168	1.	.2	1.	1.4	3.	2.	2.2	.7	3.	9.1	.1	.1	2.5	6.4	.5	1.2	.8	.3	8.	6.9
9-Mar-95	M03A0315	24.	17.1	111.	160	.1	.2	.2	1.4	.8	2.	.5	.7	4.	9.1	.1	.1	4.	6.6	1.3	1.2	.2	.3	6.	7.1
13-Mar-95	M03A0316	17.	17.2	121.	151	.1	.2	.2	1.4	1.	1.6	.5	.7	41.	13.	.1	.1	3.	6.3	1.3	1.2	.2	.3	5.	6.4
16-Mar-95	M03A0317	23.	18.3	114.	144	.1	.2	.3	1.3	3.	1.9	.5	.7	2.	11.6	.1	.1	3.	6.1	1.3	1.2	.2	.3	11.	6.7
20-Mar-95	M03A0318	18.	19.	112.	136	.1	.2	.2	1.3	3.	2.1	.5	.7	2.	11.1	.1	.1	2.	5.6	1.3	1.2	.2	.3	3.	6.3
23-Mar-95	M03A0319	19.	19.6	119.	128	.1	.2	.2	1.	2.	2.1	.5	.7	2.	8.3	.1	.1	3.	5.1	1.3	1.2	.2	.3	4.	6.1
27-Mar-95	M03A0320	14.	19.7	130.	124	.1	.2	3.	1.3	2.	2.1	.5	.7	22.	10.4	.1	.1	5.	4.7	1.3	1.2	.2	.3	40.	9.5
30-Mar-95	M03A0321	19.	19.3	132.	122	.1	.2	2.	1.	2.	2.	.5	.7	25.	12.9	.1	.1	6.	4.1	1.3	1.2	.2	.3	8.	10.1
3-Apr-95	M03A0322	17.	18.7	127.	122	.1	.2	.2	.8	2.	2.1	.5	.7	9.	12.2	.1	.1	1.	3.3	1.3	1.2	.2	.2	15.	11.1
6-Apr-95	M03A0323	23.	19.3	102.	119	.1	.1	.2	.7	1.	1.9	.5	.5	4.	12.3	.1	.1	1.	3.1	1.3	1.3	.2	.2	4.	10.7
10-Apr-95	M03A0324	12.	18.	157.	124	.1	.1	2.	.9	2.	2.	.7	.7	32.	15.4	.1	.1	4.	3.1	1.3	1.3	.2	.2	8.	10.9
13-Apr-95	M03A0325	44.	21.	107.	122	.1	.1	1.	1.	2.	2.1	.5	.7	11.	12.1	.1	.1	6.	3.4	1.3	1.3	.2	.2	3.	10.7
17-Apr-95	M03A0326	26.	21.3	171.	129	.1	.1	14.	2.5	2.	2.	1.	.7	108.	23.9	.1	.1	14.	4.7	1.3	1.3	.2	.2	17.	11.3
20-Apr-95	M03A0327	24.	22.	129.	130	.7	.2	7.	3.3	9.	2.7	2.	.9	43.	28.4	.1	.1	10.	5.6	1.3	1.3	.2	.2	34.	14.8
24-Apr-95	M03A0328	21.	22	115.	130.	.1	.2	7.	4.	1.	2.6	.5	.9	38.	32.4	.1	.1	6.	5.9	1.3	1.3	.2	.2	4.	14.8
27-Apr-95	M03A0329	24.	23.3	110.	128	.1	.2	2.	3.9	2.	2.6	.5	.9	12.	31.3	.1	.1	7.	6.1	1.3	1.3	.2	.2	9.	11.3

Metals values in PPB.

2.2 Problem Areas and Recommended Solutions

<u>Problem</u>	<u>Solution</u>
Maintain high level of safety awareness.	Daily raffle ticket program. Daily safety meetings. Safety meeting participation.
On-the-Job safety attention.	Contact all employees at least twice per day on safety issues. Review job details as work proceeds. Stop and challenge approach.
Hazard detection and response.	Safety inspections. HAZOP's on all jobs. Constant awareness.
Low flow in some INT pumping and injection wells.	Vacuum enhanced pumping. Increase injection pressure in some areas. Selected sand fracturing.
Slow progress on wetlands excavation.	Adjust work schedules when having wet weather; flexible field work plan.
Increase INT zone remediation rate.	Increase pumping and injection rates.
Low flushing rate in INT zone just SW of INT-11 wall.	Install two pumping wells and two injection wells; vacuum enhance the new pumping wells.
Affected soil in excavation at wetlands project.	Secure the area; sample and analyze; re-route the excavation; review with City of Baytown officials.

2.3 Problems Resolved

<u>Problem</u>	<u>Solution</u>
Cell D water handling.	Inject into Cell E subsurface as required.
Lagoon remediation confirmation.	Received certification notice from EPA.
Nutrient circulation on far SW end of INT plume.	Installed one pumping well.
Access to Waitkus property.	Leased the Waitkus property for the duration of the project.

2.4 Deliverables Submitted

Annual QAQC Report
March, 1995 monthly report
Refinement Notice RN-084
INT-11 Area DNAPL Containment Wall Permeability Report

2.5 Upcoming/Ongoing Events and Activities

Daily safety meetings and inspections.

Daily safety awareness program.

Emphasis on multiple work assignments.

Emphasis on hazard identification and response.

Attention to safety details.

Respond to HAZOP audits.

Increase nutrient and oxygen circulation in specific INT areas.

Daily well pump checks and maintenance.

Aquifer compliance testing in select areas and zones.

Operate S1 and INT wells for expedited in-situ bioremediation.

Ship surplus equipment.

Injection of Cell D water.

Evaluate vegetation in Lagoon area.

Operate Data Base Management System.

Total Quality process.

Continue biological activity monitoring in S1 wells and INT wells.

Minimize carbon usage in Water Treatment Plant.

Develop lagoon closure plan.

Submit MCC-1 area remediation report.

Continue wetlands restoration project.

2.6 Key Staffing Changes

Reduce project support staff by two people.

2.7 Percent Complete

Research & Development	- 98%
Facilities	- 100%
Slough	- 100%
Subsoil Investigation	-100%
Floodwall	-100%
Lagoon Remediation	-100%
Groundwater	- 81%
Lagoon Dewatering/Fixation	- 100%
Water Treatment	- 78%
Wetlands	- 78%
Demobilization	- 65%
Monitoring	- 61%

2.8 Schedule

All deliverables are on schedule.

Complete wetlands construction by July 1, 1995.

Complete active aquifer remediation by January 1, 1996.

2.9 Operations and Monitoring Data

The operations and monitoring data are submitted as parts of Sections 3.0, 4.0, 5.0, and 6.0 of this report, and the supporting data are stored in secure storage at the French project office.

MONTHLY PROGRESS REPORT
Summary

French Ltd. Project
FLTG, Incorporated

2.10 Credits Accrued/Applied

Status of Credits

	Accrued this period	Accrued to date	Applied this period	Applied to date	Running total
December 1990	34	34	0	0	34
December 1991	0	100	0	0	100
December 1992	0	101	0	2	99
December 1993	0	104	0	4	100
January 1994	0	104	0	4	100
February 1994	0	104	0	4	100
March 1994	0	104	0	4	100
April 1994	0	104	0	4	100
May 1994	0	104	0	4	100
June 1994	0	104	0	4	100
July 1994	5	109	0	4	105
August 1994	0	109	0	4	105
September 1994	0	109	0	4	105
October 1994	0	109	0	4	105
November 1994	0	109	0	4	105
December 1994	0	109	0	4	105
January 1995	0	109	0	4	105
February 1995	0	109	0	4	105
March 1995	0	109	0	4	105
April 1995	0	109	0	4	105

2.11 Community Relations

Maintained 24-hour, call-in Hot Line.

Conducted five site tours for interested parties.

Contacted nearby local residents with update on site activities.

Contacted several Riverdale residents with site status report.

Reviewed Barrett Station community development.

Supported Crosby Chamber of Commerce fund raising program.

Conducted site open house on April 27, 1995.

Issued project update.

3.0 LAGOON

3.1 Summary of Activities

Evaluating test plots of various plants in Cell E.

Added topsoil and re-graded areas to re-establish gradient from south to north. Hydro-mulched selected areas with a grass blend.

Injected about 146,000 gallons of "clean" Cell D water in Cell E subsurface.

Operated aerator in Cell D to expedite biomass degradation.

Evaluating various options for gradient control inside the lagoon.

Continued dismantling and disposal of scrap piping.

3.2 Problems and Response Action

<u>Problem</u>	<u>Recommended Solution</u>
Ground cover growth slow in Cell E.	Hydroseed a rye grass blend. Water frequently. Evaluate different grass blends.
Poor tree growth in Cell E.	Evaluate different types of trees. Design an irrigation system.

3.3 Problems Resolved

<u>Problem</u>	<u>Recommended Solution</u>
Treat Cell D water.	Inject in Cell E subsurface.

3.4 Deliverables Submitted

None.

3.5 Upcoming Events and Activities

Maintain pH, DO, OUR, and nutrient levels in Cell D.

Operate aerator/mixer in Cell D as required.

Inject Cell D water in Cell E subsurface.

Hydroseed Cell E and Cell F as required.

Maintain vegetation in Cell E.

Dismantle and dispose of surplus pipe.

4.0 GROUNDWATER AND SUBSOIL REMEDIATION

4.1 Summary of Activities

4.1.1 Operation of Production and Injection Well Systems

Operation of the production and injection wells systems during April 1995 is summarized in Table 4-1. Flows from the production well system are summarized in Table 4-2 and Figure 4-1. Flows into the injection well system are summarized in Table 4-3 and Figure 4-2. Individual well flows are summarized in Table 4-4.

4.1.2 Operational Monitoring

Operational monitoring associated with the groundwater and subsoil remediation system during April, 1995, is summarized in Table 4-5. Results of the annual GW sampling have been issued to the EPA and placed in the appropriate repositories.

4.1.3 Data Management and Evaluation

Operational monitoring data from the groundwater and subsoil remediation system for this reporting period were entered into FLTG's database. Tables and figures for this section of the Monthly Progress Report were generated from this database.

4.2 Problems and Response Actions

Groundwater production and injection rates were at or above the targets of both production and injection wells. The new goal for production well rates is 90 gpm. See Table 4-1. Nutrient and dissolved oxygen concentrations in injection water were at or close to target levels. No specific response action is planned.

Table 4-1

Groundwater System Operation - April 1995 <i>Reporting Period: April 1-30 (30 days)</i>	
Production System	
No. of production wells: 113 (S1 unit, 53; INT unit, 60)	
No. of operational wells by end of month: 60 (S1 unit, 16; INT unit, 44)	
Changes in system since last month: complete INT-229, -230 as prod. well	
No. of wells off line having reached criteria: 37 16 wells off inside lagoon	
Groundwater produced: 5.0 M gal; 252.0 M gal since startup based on main meter Total production rate: avg. 94 gpm (target 90 gpm); range 93-117 gpm S1 production rate: avg. 48.1 gpm; avg. 3.0 gpm per metered well INT production rate: avg. 45.9 gpm; avg. 1.0 gpm per metered well Total flow rate apportioned between S1 and INT units based on individual well meter readings; average flows based on 30 days operation	
TOC (non-volatile) concentration avg. 41 ppm; range 31-58 ppm TOC mass removed: 1,706 lb. (367,771 lb. since startup); 57 lb./day	
Injection System	
No. of injection wells: 66 (S1 unit, 20 [12 on line]; INT unit, 46 [31 on line])	
Rainfall during period: 1.39 inches	
Changes in system since last month: converted S1-18 to injection	
Groundwater injected: 5.8 M gal (150.2 M gal since startup) based on main meters	
S1 unit injected: 3.4 M gal (82.5 M gal since startup) INT unit injected: 2.4 M gal (67.7 M gal since startup) Total injection rate: avg. 134 gpm (target 100 gpm); range 113-149 gpm S1 injection rate: avg. 47.5 gpm; avg. 4.0 gpm per well INT injection rate: avg. 56.5 gpm; avg. 1.8 gpm per well Total flow rate apportioned between S1 and INT units based on individual well meter readings; average flows based on 30 days operation	
Oxygen added to injection water: 9,905 lb.; 330.2 lb./day used (input efficiency = 20%) Avg. DO in injection water: S1, 33.4 ppm; INT, 48.0 ppm (target 40 ppm) \Rightarrow 66.5 lb./day injected	
Volume of 9.1% w/w KNO ₃ nutrient solution added to INT unit, and 2 S1-North wells: 9,076 gal Nutrient flow rate: 302.5 gpd; 0.25% of INT + S1-North inflow rate (target 0.38%) Calculated injection water NO ₃ concentration: 64.1 mg/L-N (target 50 mg/L-N)	

Note that average monthly flow rates at individual wells (calculated from weekly individual well flow meter readings) are not used directly to determine S1 and INT unit inflows and outflows, but are used to apportion total production and injection flows (calculated from daily main production and injection meter readings) between S1 and INT units. Average flows are based on the 30 day reporting period.

Table 4-2

Daily Groundwater Production and TOC Removal
April 1995

Date	Project Day	T-101 Outflow Rate (FQ-101A)	T-101 Outflow Rate	T-101 Influent Ave. TOC	T-101 Influent TOC Loading
		(gpd)	(gpm)	(mg/L)	(kg/day)
1-Apr	1179	154,500	107	33	19
2-Apr	1180	146,000	101	34	19
3-Apr	1181	152,000	106	45	26
4-Apr	1182	162,200	113	28	17
5-Apr	1183	158,300	110	36	22
6-Apr	1184	168,400	117	48	31
7-Apr	1185	163,900	114	46	29
8-Apr	1186	152,100	106	38	22
9-Apr	1187	149,400	104	53	30
10-Apr	1188	146,000	101	37	20
11-Apr	1189	143,700	100	38	21
12-Apr	1190	141,000	98	37	20
13-Apr	1191	151,000	105	58	33
14-Apr	1192	145,700	101	40	22
15-Apr	1193	139,200	97	40	21
16-Apr	1194	137,200	95	38	20
17-Apr	1195	139,100	97	33	17
18-Apr	1196	145,100	101	45	25
19-Apr	1197	146,600	102	37	21
20-Apr	1198	144,700	100	37	20
21-Apr	1199	146,100	101	38	21
22-Apr	1200	143,900	100	38	21
23-Apr	1201	139,800	97	38	20
24-Apr	1202	139,400	97	33	17
25-Apr	1203	137,800	96	34	18
26-Apr	1204	136,000	94	31	16
27-Apr	1205	136,300	95	41	21
28-Apr	1206	134,600	93	39	20
29-Apr	1207	137,300	95	35	18
30-Apr	1208	144,200	100	39	21
Month Average		155,956	108	41	24
Month Total		4,990,600		1706 lbs.	766

MONTHLY PROGRESS REPORT
Groundwater and Subsoil Remediation

French Ltd. Project
FLTG, Incorporated

Table 4-3

Daily Injection Flows
April 1995

Date	Project Day	INT South INT-90/100 S1 North Injection Wells FQ905		INT North (not INT-90/100) Injection Wells Meter FQ-906		S1 South Injection Wells Meter FQ-909		Total Injection Rate		Oxygen	Nutrients
		(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	(gpd)	(gpm)	lbs	Gallons
1-Apr	1179	39,700	28	46,800	33	126,200	88	212,700	148	400	293
2-Apr	1180	37,100	26	44,500	31	119,900	83	201,500	140	300	289
3-Apr	1181	38,500	27	46,900	33	126,200	88	211,600	147	300	300
4-Apr	1182	38,200	27	45,600	32	126,900	88	210,700	146	300	289
5-Apr	1183	39,600	28	46,700	32	128,400	89	214,700	149	320	285
6-Apr	1184	41,000	28	41,500	29	130,700	91	213,200	148	320	296
7-Apr	1185	41,100	29	35,600	25	128,800	89	205,500	143	360	312
8-Apr	1186	42,000	29	35,900	25	130,400	91	208,300	145	300	262
9-Apr	1187	41,600	29	35,700	25	129,300	90	206,600	143	400	338
10-Apr	1188	40,000	28	40,200	28	125,000	87	205,200	143	300	312
11-Apr	1189	41,200	29	43,500	30	122,200	85	206,900	144	295	312
12-Apr	1190	41,800	29	44,300	31	118,700	82	204,800	142	300	308
13-Apr	1191	41,400	29	40,200	28	111,500	77	193,100	134	380	300
14-Apr	1192	39,100	27	39,400	27	113,100	79	191,600	133	280	291
15-Apr	1193	35,700	25	40,900	28	106,800	74	183,400	127	340	285
16-Apr	1194	34,600	24	39,900	28	103,100	72	177,600	123	300	323
17-Apr	1195	35,200	24	40,200	28	106,800	74	182,200	127	300	308
18-Apr	1196	38,600	27	41,900	29	109,300	76	189,800	132	395	293
19-Apr	1197	38,100	26	42,300	29	114,700	80	195,100	135	300	239
20-Apr	1198	39,800	28	42,600	30	114,600	80	197,000	137	300	251
21-Apr	1199	40,900	28	42,100	29	113,500	79	196,500	136	280	292
22-Apr	1200	42,100	29	43,900	30	105,800	73	191,800	133	300	334
23-Apr	1201	41,700	29	44,400	31	100,400	70	186,500	130	360	307
24-Apr	1202	41,700	29	42,300	29	107,300	75	191,300	133	200	346
25-Apr	1203	41,300	29	40,600	28	101,600	71	183,500	127	400	327
26-Apr	1204	40,800	28	29,700	21	92,200	64	162,700	113	600	331
27-Apr	1205	40,300	28	38,900	27	88,700	62	167,900	117	295	312
28-Apr	1206	40,300	28	39,000	27	85,100	59	164,400	114	300	307
29-Apr	1207	43,000	30	41,300	29	89,400	62	173,700	121	360	312
30-Apr	1208	43,100	30	41,500	29	95,100	66	179,700	125	320	322
Month Average		39,983	28	41,277	29	112,390	78	193,650	134	330	303
Month Total		1,199,500		1,238,300		3,371,700		5,809,500		9,905	9,076

Table 4-4

Average Production and Injection Flow Rates - April, 1995

Flow rates are averages for the period April 1 - April 30 (30 days)

S1 Production Wells (16)		S1 Injection Wells (112)		INT Production Wells (44)		INT Injection Wells (31)	
Well ID	gpm	Well ID	gpm	Well ID	gpm	Well ID	gpm
S1-1	OFF	S1-18	2.0	INT-1	1.2	INT-63	1.1
S1-2	OFF	S1-49	OFF	INT-2	0.8	INT-64	3.3
S1-3	OFF	S1-50	OFF	INT-3	0.2	INT-71	2.2
S1-4	OFF	S1-61	OFF	INT-4	0.2	INT-72	1.1
S1-5	OFF	S1-62	OFF	INT-5	1.7	INT-73	3.1
S1-6	OFF	S1-63	OFF	INT-6	0.3	INT-74	1.8
S1-7	OFF	S1-64	4.4	INT-7	0.2	INT-75	0.7
S1-8	OFF	S1-65	2.2	INT-8	1.5	INT-76	2.8
S1-9	OFF	S1-66	OFF	INT-9	1.2	INT-77	3.9
S1-10	OFF	S1-67	OFF	INT-10	3.8	INT-78	3.8
S1-11	OFF	S1-68	OFF	INT-11	0.5	INT-79	0.6
S1-12	OFF	S1-69	2.9	INT-12	1.4	INT-80	1.0
S1-13	OFF	S1-65	5.5	INT-13	0.3	INT-81	5.1
S1-14	OFF	S1-66	4.6	INT-14	OFF	INT-82	0.5
S1-15	OFF	S1-67	6.1	INT-15	OFF	INT-83	0.5
S1-16	OFF	S1-68	5.0	INT-16	OFF	INT-84	2.0
S1-17	1.7	S1-69	3.2	INT-17	OFF	INT-85	OFF
S1-18	2.8	S1-70	2.9	INT-18	OFF	INT-86	OFF
S1-20	2.2	S1-101	2.4	INT-19	0.2	INT-87	OFF
S1-21	10.1	S1-133	6.3	INT-20	0.2	INT-88	OFF
S1-22	1.2	Total	47.5	INT-21	0.5	INT-89	OFF
S1-23	OFF	Average	4.0	INT-22	0.2	INT-90	OFF
S1-24	OFF			INT-23	0.1	INT-91	OFF
S1-25	1.1			INT-24	0.5	INT-92	OFF
S1-26	8.4			INT-25	OFF	INT-93	OFF
S1-27	1.2			INT-26	0.5	INT-94	OFF
S1-28	4.7			INT-27	1.5	INT-95	OFF
S1-29	1.7			INT-28	0.4	INT-96	OFF
S1-30	3.5			INT-29	OFF	INT-97	1.7
S1-31	OFF			INT-30	OFF	INT-98	1.8
S1-32	3.3			INT-31	OFF	INT-99	OFF
S1-33	OFF			INT-32	OFF	INT-100	OFF
S1-34	OFF			INT-33	OFF	INT-201	OFF
S1-35	OFF			INT-55	2.2	INT-202	1.1
S1-36	OFF			INT-56	0.6	INT-203	0.4
S1-37	OFF			INT-57	1.7	INT-204	1.7
S1-38	OFF			INT-58	2.7	INT-218	2.1
S1-39	OFF			INT-59	0.3	INT-219	1.7
S1-40	OFF			INT-60	1.9	INT-220	0.5
S1-41	OFF			INT-61	1.4	INT-221	0.8
S1-42	OFF			INT-62	0.6	INT-222	3.9
S1-43	OFF			INT-65	OFF	INT-223	1.5
S1-44	OFF			INT-66	OFF	INT-224	2.0
S1-45	OFF			INT-143	0.2	INT-225	3.4
S1-46	OFF			INT-205	1.1	INT-226	0.3
S1-47	OFF			INT-206	0.7	INT-227	0.3
S1-48	OFF			INT-207	0.9	Total	56.5
S1-50	OFF			INT-208	4.0	Average	1.8
S1-61	0.4			INT-209	0.2		
S1-62	5.2			INT-210	1.5		
S1-63	2.0			INT-211	OFF		
S1-64	0.6			INT-212	1.8		
Total	48.1			INT-213	1.3		
Average*	3.0			INT-214	OFF		
				INT-215	2.7		
				INT-216	OFF		
				INT-217	2.0		
				INT-228	0.1		
				INT-229	0.4		
				INT-230	0.5		
				Total	45.9		
				Average	1.0		

Well: S1-18 and S1-133 receive oxygen and nutrient amended injection water

Subtotal 8.3

All other S1 wells receive oxygenated injection water only

Notes

OFF - well inoperative

NM - well running but not metered

PP - well in pulse pumping mode

All INT injection wells receive oxygen- and nutrient-amended injection water

* of metered wells

Note: total and average flow rates for S1 and INT units are corrected (per main flow meter readings) for use in Table 4-1.

Table 4-5

Operational Monitoring - April 1995

Activity	Frequency	Purpose
Check production and injection wells for pump, meter, and level control operation, injection pressure, and gas buildup.	Daily	Identify and respond to individual well problems; maintain operating efficiency.
Flow meter readings	Weekly	Identify and respond to individual well problems; maintain operating efficiency.
Read groundwater treatment plant inflow and outflow meters; nutrient injection flow meters; oxygen flows, pressure and temperature; and injection header back pressure.	2x daily	Identify and respond to treatment plant problems; control nutrient and injection flow rates.
Measure T-101 influent TOC.	2x daily	Track TOC removal.
Measure dissolved oxygen at 6 representative S1 and INT injection wells.	Weekly	Control oxygen injection.
Conduct water levels DO and TOC on 22 monitoring wells.	Weekly	Define progress of new INT wells and shut-off areas. Track DO breakthrough.
Conduct water levels on shut-off wells.	Monthly	Track level recovery in shut-off wells.
Conduct TOC and DO on select production wells.	Weekly	Track TOC and DO levels in critical areas.

Figure 4-1

Production Flows

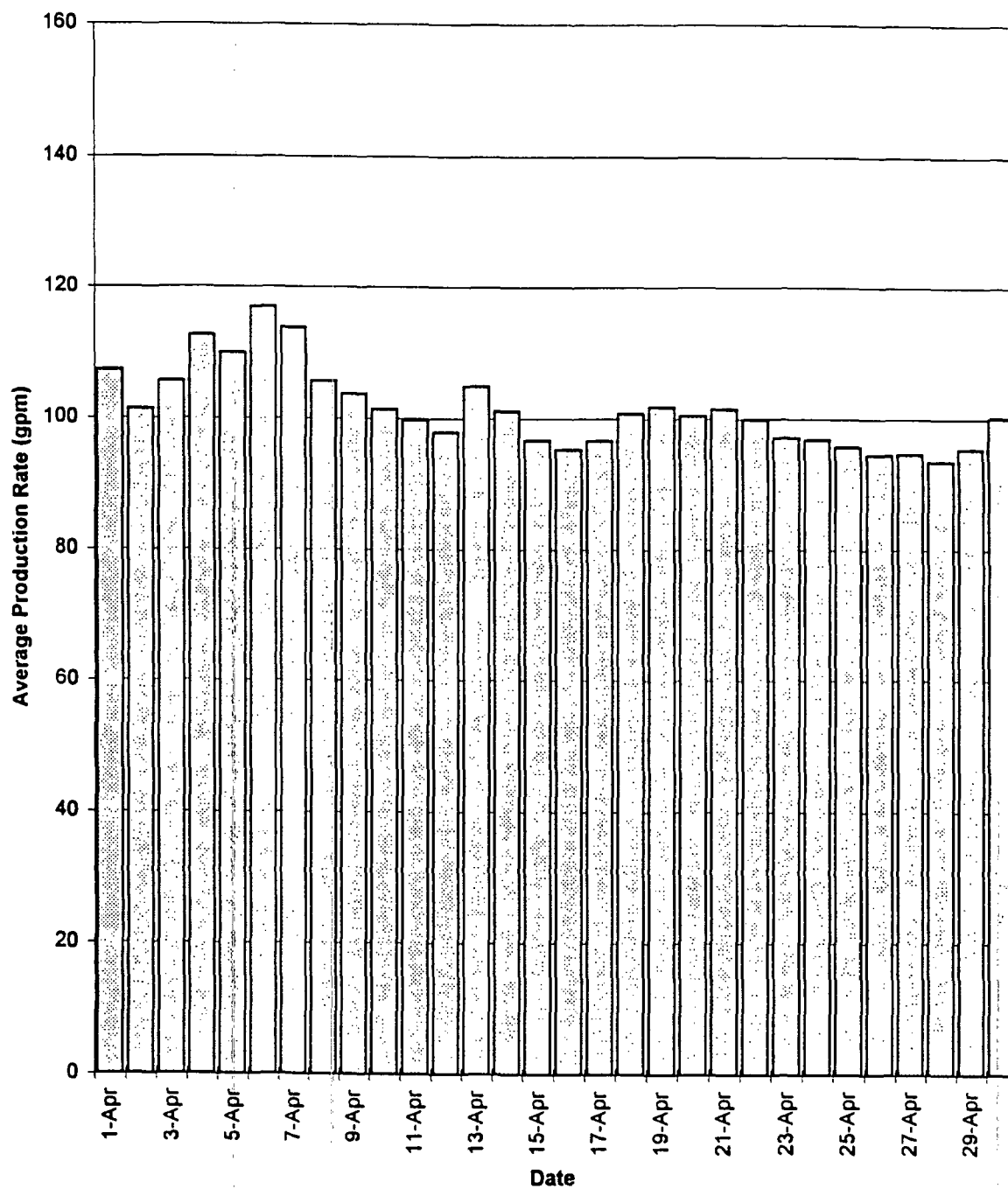
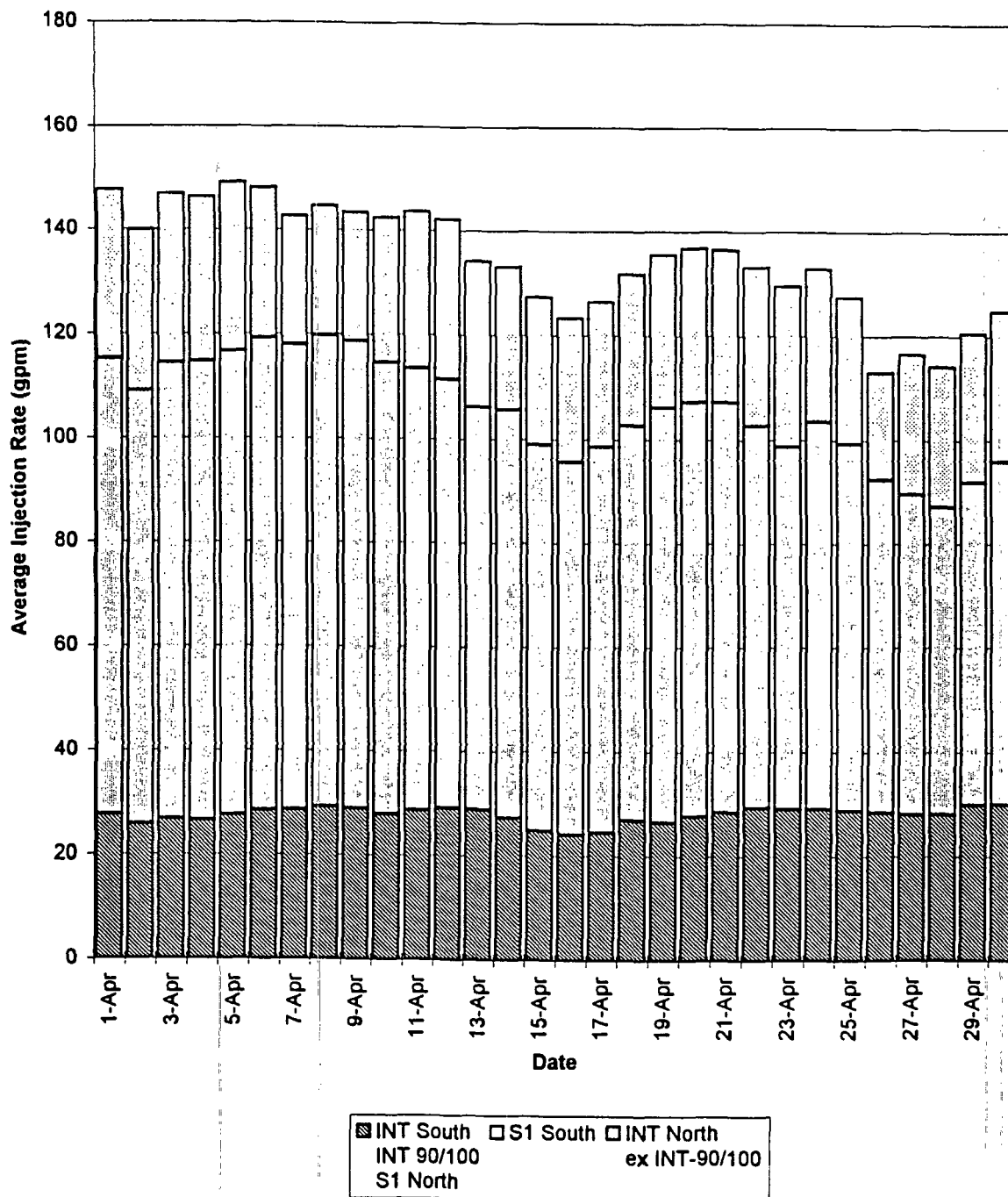


Figure 4-2

Injection Flows



4.3 Pending Issues

4.3.1 S1 Unit Pulse Pumping

No wells are on a pulse pump program this period.

4.4 Operational Refinements

S1-18, INT-14, INT-18, INT-65, INT-66 added to shut-off list for meeting criteria.
S1-18 converted to an injection well.

4.5 Data Summary and Discussion

4.5.1 Groundwater Production and Injection

Groundwater production rates were adjusted to 90 gpm to compensate for the expanded shut-off. Injection rate target remains the same.

4.5.2 Groundwater Levels and Flow Directions

The current extent of contaminated groundwater is contained within the S1 and INT extraction system capture zones.

Water level contour maps are presented on a quarterly basis.

4.5.3 TOC in shallow groundwater

TOC analyses on production wells were completed the first week in April. The analyses are in Table 4-7 and Table 4-8. The overall average TOC level continues to drop.

4.5.4 In-Situ Bioremediation

Complimentary injection wells were shut off to balance production wells reaching criteria. The emphasis continues to be to maximize delivery of oxygen and nutrients to the INT system. Dissolved oxygen analysis was conducted on the monitoring wells during the third well volume pumped.

A work plan was developed for natural attenuation modeling and submitted to USEPA.

Three Biological Activity Monitors (BAM) were installed in each of 11 S1 monitoring wells and 14 INT monitoring wells during the first week of March. Coupons were incubated for 26 days and replaced for the fourth incubation period beginning in May. The data for both sets of coupons are summarized in Table 4-6. The mean activity for the system was generally constant for the S1 zone but decreased in the

INT zone. Variation between coupons in the same well remains low and consistent with previous monitoring periods in both zones.

Figure 4-3 shows activity in the S1 zone during the past 90 days. Activity continued to increase at the east end, outside the flood wall (130, 131) but decreased just across the flood wall (126). The population also decreased sharply in ERT-9A. Overall activity decreased moderately in most of the other S1 wells.

Activity in the INT zone during the last 90 day period is shown in Figure 4-4. Activity was fairly uniform throughout the central zone during April but increased significantly in six (6) out of seven (7) wells in the western region in April. Inside the flood wall, activity decreased in all three (3) wells in April. The mean for the period was similar to the previous period and lower than the initial readings in February. Improved release of organic carbon following the sand fracturing may be responsible, at least in part, for the consistent, across-the-board, increase in activity in the INT west end wells during the last 30-day period. Changes of this magnitude were generally not observed at other INT locations.

The fourth series of coupons were installed the first week of May and will be harvested at the end of the month.

Now that we have three data points for each well, some trends may be emerging that appear to affirm anticipated trends. Although the decreased populations in the two inside wells was unexpected. Some consistent trends are:

Decreased activity

S1 ERT-9A (Central)
S1-123 (Central)
S1-126 (Inside)

INT-102 (Central)
INT-129 (Inside)

Increased activity

S1-130 (East end)
S1-131 (East end)

INT-105 (Central)
INT-106 (Central)

4.6 Schedule

Preparing to vacuum enhance INT-228 and -230.

Table 4-6

Biological Activity Monitor Results and Statistics

S1 MONITOR WELLS

		*****MEAN*****		
LOCATION	WELL	FEB	MAR	APR
CENTRAL	106	0.46	0.71	0.61
CENTRAL	108	0.57	0.27	0.37
CENTRAL	121	0.66	0.64	0.42
CENTRAL	123	1.05	0.69	0.43
WEST	110	0.46	0.12	0.41
WEST	112	0.38	0.18	0.39
INSIDE	ERT-9A	6.24	2.34	0.65
INSIDE	P-6	0.84	1.29	0.94
INSIDE	126	1.58	1.31	0.59
EAST	130	0.51	1.83	1.97
EAST	131	1.24	2.83	7.85
MEAN		1.27	1.11	1.33

INT MONITOR WELLS

		*****MEAN*****		
LOCATION	WELL	FEB	MAR	APR
WEST	134	0.44	0.12	0.37
WEST	113	0.65	0.13	0.86
WEST	112	0.57	0.19	0.51
WEST	111	0.50	0.76	0.46
WEST	101	0.38	0.21	0.37
WEST	W-3	0.60	0.11	0.37
WEST	REI-10-3	1.18	0.20	0.51
INSIDE	131	0.48	0.72	0.37
INSIDE	129	0.76	0.63	0.53
INSIDE	W-7	0.75	0.96	0.53
CENTRAL	108	0.54	0.41	0.45
CENTRAL	106	0.36	0.37	0.48
CENTRAL	105	0.27	0.68	0.39
CENTRAL	102	0.63	0.56	0.38
MEAN		0.58	0.43	0.47

Figure 4-3

Coupon HMB Values for S1 Zone
1995 BAM PROGRAM, FRENCH LTD. PROJECT

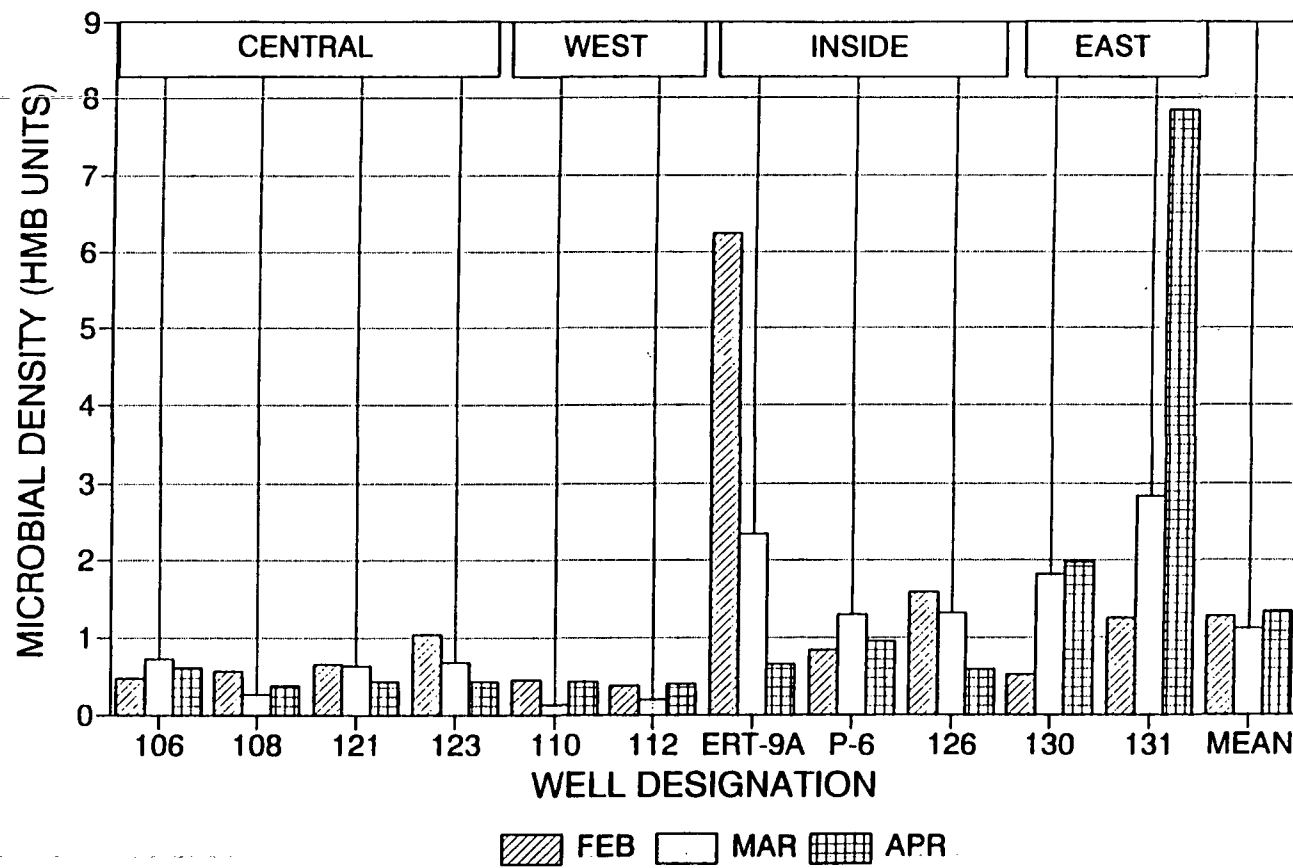


Figure 4-4

Coupon HMB Values for INT Zone
1995 BAM PROGRAM, FRENCH LTD. PROJECT

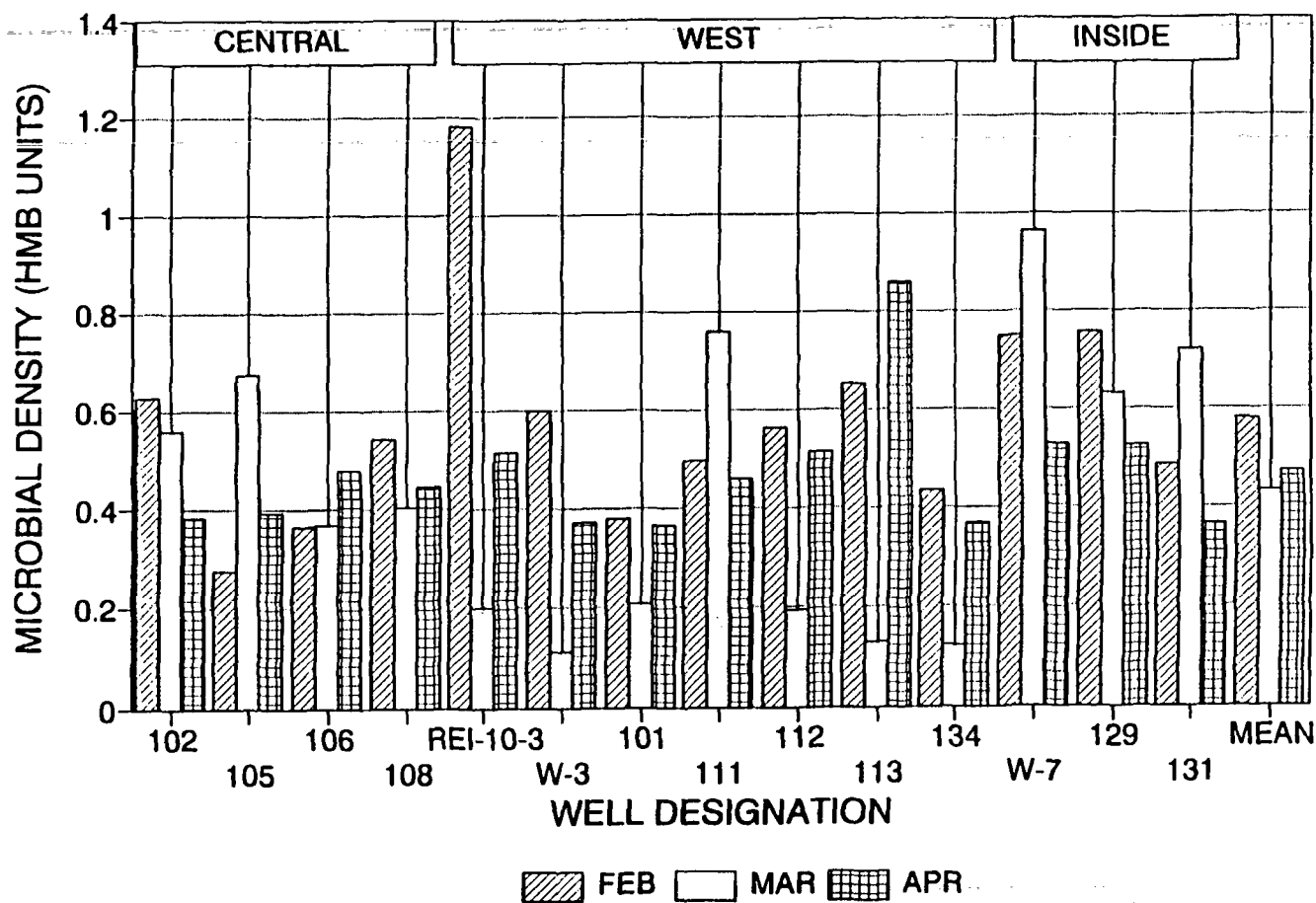


Table 4-7

HISTORY OF TOC CONCENTRATIONS AT S1 PRODUCTION WELLS											
Well ID	Baseline Nov-Dec 91 (ppm)	Mar 1994 (ppm)	June 1994 (ppm)	Sep 1994 (ppm)	Nov 1994 (ppm)	Dec 1994 (ppm)	Jan 1995 (ppm)	Feb 1995 (ppm)	Mar 1995 (ppm)	Apr 1995 (ppm)	
S1-1	290	1,317	1,360	1,133	1,215	NS	1,592	NS	NS	NS	
S1-2	190	1,510	1,139	1,251	NS	NS	1,044	NS	NS	NS	
S1-3	370	1,037	755	566	750	NS	624	NS	NS	NS	
S1-4	47	1,025	668	620	576	NS	582	NS	NS	NS	
S1-5	51	1,151	473	NS	NS	NS	504	NS	NS	NS	
S1-6	51	1,315	892	928	NS	NS	774	NS	NS	NS	
S1-7	200	1,327	786	660	NS	NS	708	NS	NS	NS	
S1-8	64	1,516	1,110	935	909	NS	708	NS	NS	NS	
S1-9	77	2,085	1,589	567	NS	NS	1,520	NS	NS	NS	
S1-10	46	2,540	1,800	567	2,001	NS	2,205	1,860	448	1680	
S1-11	120	NS	1,751	2,510	1,825	NS	2,121	2,320	40	1608	
S1-12	140	2,129	1,445	2,355	1,086	NS	1,850	1,960	344	105	
S1-13	520	990	722	1,077	960	NS	678	820	312	0	
S1-14	590	1,616	1,443	1,440	1,000	NS	1,392	1,430	592	1340	
S1-15	5,300	2,778	2,280	2,583	1,450	NS	2,597	2,530	1,488	3059	
S1-16	8,900	2,732	718	NS	1,744	NS	1,050	330	136	288	
S1-17	6,800	344	180	141	92	NS	73	76	72	46	
S1-18	2,200	44	34	49	45	NS	24	37	72	23	
S1-19	20	33	28	39	22	NS	14	16	32	18	
S1-20	120	141	50	60	43	NS	21	16	17	6	
S1-21	65	17	8	42	11	NS	6	3	11	15	
S1-22	290	4	19	64	31	NS	30	55	NS	199	
S1-23	350	27	21	29	20	NS	13	12	NS	7	
S1-24	250	16	18	42	17	NS	13	10	NS	19	
S1-25	550	16	15	33	23	NS	13	13	NS	10	
S1-26	540	22	18	49	16	NS	14	11	NS	10	
S1-27	220	60	42	88	128	NS	25	31	NS	24	
S1-28	370	12	15	21	18	NS	14	16	NS	10	
S1-29	670	23	20	33	20	NS	16	11	NS	23	
S1-30	370	78	31	86	28	NS	20	22	NS	15	
S1-31	14	29	17	29	25	NS	12	11	NS	NS	
S1-32	18	85	49	73	40	NS	35	37	41	73	
S1-33	10	16	NS	567	NS	NS	NS	NS	NS	NS	
S1-34	11	75	13	18	NS	NS	NS	NS	NS	NS	
S1-35	24	45	43	37	NS	NS	28	NS	NS	NS	
S1-36	200	44	27	39	NS	NS	NS	NS	NS	NS	
S1-37	13	55	9	36	NS	NS	NS	NS	NS	NS	
S1-38	59	6	NS	22	NS	NS	NS	NS	NS	NS	
S1-39	290	22	11	17	NS	NS	10	12	NS	NS	
S1-40	150	33	15	17	18	NS	18	21	NS	NS	
S1-41	170	12	11	16	NS	NS	10	16	NS	NS	
S1-42	88	37	NS	22	NS	NS	NS	NS	NS	NS	
S1-43	4	NS	NS	14	NS	NS	NS	NS	NS	NS	
S1-44	280	44	21	28	NS	NS	9	19	NS	NS	
S1-45	4,400	30	NS	24	NS	NS	10	32	NS	NS	
S1-46	480	10	NS	24	10	NS	4	11	NS	NS	
S1-47	1,200	61	NS	31	NS	NS	24	28	NS	NS	
S1-48	1,200	31	NS	22	NS	NS	15	22	NS	NS	
S1-60	48	15	NS	17	NS	NS	8	14	NS	NS	
S1-61	NS	NS	758	366	152	NS	78	116	108	63	
S1-62	NS	NS	125	27	18	NS	20	14	11	3	
S1-63	NS	NS	264	241	150	NS	155	120	70	47	
S1-64	NS	NS	512	66	55	NS	44	50	43	61	

NS = Not Sampled

Table 4-8

HISTORY OF TOC CONCENTRATIONS AT INT PRODUCTION WELLS										
Well ID	Baseline Nov-Dec 91 (ppm)	Mar 1994 (ppm)	June 1994 (ppm)	Sep 1994 (ppm)	Nov 1994 (ppm)	Dec 1994 (ppm)	Jan 1995 (ppm)	Feb 1995 (ppm)	Mar 1995 (ppm)	Apr 1995 (ppm)
INT-1	3,600	800	374	320	253	NS	204	270	273	369
INT-2	1,800	290	339	281	214	NS	91	492	563	253
INT-3	5,200	1,188	1,260	932	1,550	NS	1,016	940	624	551
INT-4	610	1,300	541	430	NS	NS	198	180	209	229
INT-5	960	205	101	103	90	NS	76	70	45	87
INT-6	280	510	200	195	100	NS	76	72	46	66
INT-7	100	99	140	101	38	NS	120	123	NS	116
INT-8	75	84	60	64	43	NS	47	45	NS	47
INT-9	800	142	77	70	NS	NS	68	58	NS	72
INT-10	1,900	112	62	82	135	NS	45	45	20	55
INT-11	590	NS	44	113	31	NS	31	27	29	50.4
INT-12	3,300	106	105	74	23	NS	32	16	31	72
INT-13	590	63	89	50	23	NS	34	12	NS	11
INT-14	24	112	NS	119	53	NS	39	50	54	0
INT-15	19	20	19	47	18	NS	17	16	NS	NS
INT-16	2,000	15	11	68	9	NS	6	11	NS	NS
INT-17	7	13	NS	19	14	NS	8	14	NS	NS
INT-18	4	162	73	57	29	NS	24	20	31	35
INT-19	1,400	55	36	38	39	NS	56	49	NS	38
INT-20	3,500	2,525	1,922	1,182	NS	NS	1,480	1,478	1,425	998
INT-21	29	240	214	190	NS	NS	204	132	540	188
INT-22	8	55	44	95	NS	NS	117	135	199	160
INT-23	16	40	50	112	NS	NS	35	40	30	NS
INT-24	240	136	89	84	65	NS	58	58	NS	47
INT-25	36	65	24	29	NS	NS	20	18	NS	NS
INT-26	120	152	38	122	123	NS	110	108	NS	107
INT-27	180	116	85	79	80	NS	65	75	NS	65
INT-28	630	48	34	37	23	NS	22	26	NS	47
INT-29	1,100	104	65	76	58	NS	35	40	NS	NS
INT-30	1,400	32	32	45	24	NS	27	20	NS	NS
INT-31	70	52	25	82	30	NS	20	19	NS	NS
INT-32	880	16	24	22	11	NS	12	16	NS	NS
INT-33	120	255	47	20	17	NS	10	9	NS	NS
INT-55	NS	115	98	122	61	NS	65	48	NS	78
INT-56	NS	925	435	297	146	NS	132	120	NS	131
INT-57	NS	40	61	66	51	NS	75	68	NS	55
INT-58	NS	76	46	34	33	NS	28	29	NS	26
INT-59	NS	115	77	79	49	NS	50	42	NS	61
INT-60	NS	195	118	110	85	NS	88	80	NS	90
INT-61	NS	95	48	39	40	NS	31	31	NS	32
INT-62	NS	100	38	35	43	NS	29	20	NS	28
INT-65	NS	NS	65	66	61	NS	51	41	NS	50
INT-66	NS	175	113	120	94	NS	94	85	NS	51
INT-205	NS	120	39	61	39	NS	34	34	NS	50
INT-206	NS	44	53	107	86	NS	68	60	NS	51.5
INT-207	NS	56	52	45	60	NS	74	92	95	100.1
INT-208	NS	20	38	22	16	NS	11	18	NS	16
INT-209	NS	52	43	37	19	NS	13	17	NS	5
INT-210	NS	24	22	27	28	NS	23	26	NS	28
INT-211	NS	88	57	43	46	NS	29	41	NS	NS
INT-212	NS	NS	36	27	38	NS	41	38	NS	69
INT-213	NS	NS	36	83	70	NS	91	143	NS	89
INT-214	NS	NS	35	46	31	NS	22	26	NS	NS
INT-215	NS	NS	170	82	82	NS	56	67	NS	43
INT-216	NS	NS	22	34	28	NS	28	34	NS	NS
INT-217	NS	NS	62	66	61	NS	60	62	NS	75
NS = Not Sampled										
Averages										
S1	784	565	484	387	439	NS	451	336	226	337
INT	957	236	148	125	89	NS	100	105	263	111

Table 4-9

Dissolved Oxygen at Production Wells

Well	9/1/94	11/23/94	1/1/95	3/26/95	4/5/95
S1-1	2.1	0.8	1.6	NM	NM
S1-2	1.7	1.6	1.1	NM	NM
S1-3	1.8	1.0	1.1	NM	NM
S1-4	2.0	0.8	0.9	NM	NM
S1-5	NM	NM	1.6	NM	NM
S1-6	1.6	NM	0.8	NM	NM
S1-7	1.3	NM	1.2	NM	NM
S1-8	1.1	0.7	0.8	NM	NM
S1-9	0.8	NM	1.5	NM	NM
S1-10	0.6	0.5	1.0	NM	0.9
S1-11	1.1	0.9	1.4	NM	0.8
S1-12	1.1	1.3	1.5	NM	1.4
S1-13	1.7	1.3	1.5	NM	0.7
S1-14	1.1	0.4	0.8	NM	0.8
S1-15	1.4	0.7	0.7	NM	0.9
S1-16	NM	1.2	2.9	NM	2.7
S1-17	1.2	0.8	1.4	NM	1.7
S1-18	2.4	1.4	2.2	NM	6.8
S1-19	3.4	3.9	6.6	NM	6.5
S1-20	1.6	1.7	3.2	NM	13.0
S1-21	15+	15+	15+	NM	13.6
S1-22	1.5	0.7	1.6	NM	1.8
S1-23	1.9	1.5	4.8	NM	15.0
S1-24	0.9	2.6	1.8	NM	2.4
S1-25	0.8	0.8	1.4	NM	2.2
S1-26	2.2	0.7	1.1	NM	1.4
S1-27	1.4	1.9	2.0	NM	1.9
S1-28	1.2	1.2	1.7	NM	5.0
S1-29	1.9	2.2	4.4	NM	2.5
S1-30	1.5	1.1	4.2	NM	1.8
S1-31	1.8	1.6	1.2	NM	NM
S1-32	1.4	1.5	1.6	0.6	2.2
S1-33	1.4	NM	NM	NM	NM
S1-34	1.2	NM	NM	NM	NM
S1-35	1.7	NM	1.5	NM	NM
S1-36	0.9	NM	NM	NM	NM
S1-37	1.3	NM	NM	NM	NM
S1-38	15+	NM	NM	NM	NM
S1-39	1.3	2.9	3.2	NM	NM
S1-40	2.2	1.0	2.0	NM	NM
S1-41	1.0	1.0	1.4	NM	NM
S1-42	14.0	NM	NM	NM	NM
S1-43	2.2	NM	NM	NM	NM
S1-44	1.8	6.0	1.8	NM	NM
S1-45	2.9	2.3	5.1	NM	NM
S1-46	13.5	15+	15+	NM	NM
S1-47	9.6	8.7	5.4	NM	NM
S1-48	5.3	4.2	5.0	NM	NM
S1-60	6.1	4.4	5.6	NM	NM
S1-61	1.1	0.8	1.2	0.8	2.0
S1-62	1.4	2.8	12.6	NM	15.0
S1-63	2.2	0.9	4.0	0.9	4.2
S1-64	2.4	1.8	4.1	0.9	15.0

Table 4-9 (Continued)

Dissolved Oxygen at Production Wells					
Well	9/1/94	11/23/94	1/1/95	3/26/95	4/5/95
INT-1	1.1	1.4	3.0	1.0	1.2
INT-2	1.5	0.8	0.8	0.4	1.4
INT-3	1.0	1.0	1.4	0.4	1.7
INT-4	0.9	1.1	1.2	0.5	1.0
INT-5	2.3	1.1	1.0	1.0	1.8
INT-6	0.7	1.3	1.4	1.0	1.4
INT-7	1.5	1.0	0.6	NM	0.9
INT-8	1.8	1.0	1.9	NM	1.4
INT-9	1.2	NM	1.4	NM	1.8
INT-10	1.9	1.4	1.7	0.8	2.4
INT-11	1.1	2.2	3.4	3.3	7.6
INT-12	2.2	13.8	13.8	15 +	15.0
INT-13	0.9	7.8	1.6	NM	2.7
INT-14	1.8	1.7	1.7	0.7	2.4
INT-15	1.4	1.6	2.0	NM	NM
INT-16	2.1	3.0	1.8	NM	NM
INT-17	2.9	2.2	2.6	NM	NM
INT-18	1.8	1.2	1.5	NM	1.2
INT-19	2.4	1.4	1.1	NM	1.3
INT-20	1.3	0.9	1.2	0.5	1.3
INT-21	1.7	2.6	3.0	0.6	0.9
INT-22	0.8	1.0	1.1	0.6	2.1
INT-23	1.1	2.4	2.3	NM	NM
INT-24	1.8	2.0	2.6	NM	1.8
INT-25	12.5	15+	10.2	NM	NM
INT-26	1.4	1.6	2.3	NM	1.7
INT-27	1.6	1.2	1.4	NM	1.2
INT-28	5.2	7.4	4.6	NM	1.0
INT-29	5.2	4.0	4.4	NM	NM
INT-30	9.5	9.4	1.8	NM	NM
INT-31	1.4	4.1	5.3	NM	NM
INT-32	15+	15+	15+	NM	NM
INT-33	2.5	1.9	2.5	NM	NM
INT-55	3.4	2.0	2.2	NM	0.9
INT-56	1.2	1.5	1.6	NM	0.8
INT-57	6.2	2.8	3.1	NM	2.9
INT-58	1.9	1.9	1.6	NM	1.3
INT-59	2.2	2.4	3.0	NM	1.2
INT-60	1.8	1.9	2.4	NM	1.8
INT-61	2.7	1.8	2.6	NM	2.0
INT-62	1.0	2.1	2.6	NM	2.3
INT-65	2.1	1.0	1.2	NM	1.6
INT-66	2.2	1.0	3.1	NM	6.8
INT-205	1.8	1.8	2.8	NM	2.3
INT-206	1.1	2.4	1.2	NM	1.2
INT-207	4.6	1.0	1.2	NM	0.7
INT-208	1.3	3.4	11.8	NM	8.4
INT-209	2.8	15+	14.8	NM	14.8
INT-210	15+	15+	15+	NM	11.6
INT-211	1.9	2.0	2.0	NM	NM
INT-212	1.6	2.2	1.8	NM	2.2
INT-213	1.2	1.2	2.0	NM	2.8
INT-214	3.8	4.6	2.8	NM	NM
INT-215	5.2	3.6	3.0	NM	3.1
INT-216	3.4	4.2	2.7	NM	NM
INT-217	1.6	1.2	1.8	NM	1.1

Table 4-10

Dissolved Oxygen at Monitoring Wells

	3/4/94	6/1/94	9/2/94	12/15/94	2/7/95	3/25/95	4/9/95
ERT-1	1.0	0.8	0.2	1.2	NM	NM	NM
ERT-3	1.0	1.0	0.2	1.8	NM	NM	NM
ERT-7	1.0	0.8	0.2	NM	NM	NM	NM
ERT-8	1.0	0.6	0.2	2.2	NM	NM	NM
ERT-9	1.0	1.3	0.4	NM	NM	NM	NM
ERT-22	NM	NM	NM	NM	NM	NM	0.6
ERT-24	0.8	NM	NM	2.0	NM	NM	NM
ERT-25	1.8	1.0	NM	1.6	NM	NM	NM
ERT-26	0.8	NM	NM	2.3	NM	NM	NM
ERT-27	1.9	NM	NM	NM	NM	NM	NM
ERT-28	6.4	NM	NM	4.8	NM	NM	NM
ERT-29	1.2	NM	NM	NM	NM	NM	NM
ERT-30	7.5	NM	NM	NM	NM	NM	NM
ERT-33	1.1	0.4	NM	1.1	NM	NM	NM
ERT-34	0.9	0.6	NM	NM	NM	NM	NM
FLTG-1	0.8	0.3	NM	3.6	NM	NM	NM
FLTG-2	1.0	1.2	NM	NM	NM	NM	NM
FLTG-3	1.3	0.8	NM	NM	NM	NM	NM
FLTG-4	1.0	0.6	NM	NM	NM	NM	NM
FLTG-5	0.8	0.4	NM	3.0	NM	NM	NM
FLTG-6	1.2	1.6	NM	NM	NM	NM	NM
FLTG-7	1.6	0.6	0.8	2.0	0.4	0.2	0.3
FLTG-8	1.7	0.8	0.4	2.5	0.4	NM	NM
FLTG-9	1.2	11.4	15+	NM	15+	NM	NM
FLTG-10	1.1	2.2	2.6	3.2	1.2	NM	NM
FLTG-11	0.6	0.6	0.5	NM	NM	NM	NM
FLTG-12	0.8	1.8	0.6	NM	NM	NM	NM
FLTG-13	0.3	0.8	0.4	2.6	1.3	NM	NM
FLTG-14	0.6	0.8	0.4	2.4	0.2	NM	NM
FLTG-15	0.8	1.2	NM	2.4	NM	NM	NM
INT-59-P1	1.6	0.5	0.6	NM	1.2	NM	NM
INT-59-P4	1.4	0.9	0.6	NM	0.6	NM	NM
INT-60-P1	1.7	1.0	0.4	NM	0.2	NM	NM
INT-60-P4	1.4	0.8	0.4	NM	0.5	NM	NM
INT-101	1.0	0.4	0.2	2.6	0.3	0.2	0.3
INT-102	0.6	0.6	NM	15+	15+	14.9	15+
INT-103	2.2	0.7	0.1	1.3	0.2	NM	NM
INT-104	2.3	4.8	0.3	4.6	3.2	NM	NM
INT-105	1.2	0.7	0.4	4.6	0.4	NM	NM

Table 4-10 (Continued)

Dissolved Oxygen at Monitoring Wells

	3/4/94	6/1/94	9/2/94	12/15/94	2/7/95	3/25/95	4/9/95
INT-106	15+	15+	15+	15.0	4.7	NM	NM
INT-107	15+	15+	15+	15.0	15+	NM	NM
INT-108	1.1	0.2	0.2	2.1	1.7	0.2	0.3
INT-109	1.6	0.8	0.5	2.2	0.2	NM	NM
INT-110	1.6	0.9	0.8	0.8	0.4	NM	NM
INT-111	1.2	1.4	2.0	2.8	1.4	NM	NM
INT-112	15+	15+	15+	15.0	15+	15+	15+
INT-113	0.9	15+	15+	10.3	2.0	NM	NM
INT-114	1.6	0.8	0.4	1.5	0.2	NM	NM
INT-115	1.2	1.0	0.8	4.6	0.7	NM	NM
INT-116	2.4	3.8	NM	2.4	NM	NM	NM
INT-117	2.7	2.8	NM	3.1	NM	NM	NM
INT-118	4.8	2.2	NM	2.0	NM	NM	NM
INT-119	1.1	0.7	1.1	1.1	0.3	NM	NM
INT-132	2.0	1.8	0.4	3.6	0.7	NM	NM
INT-133	0.8	1.2	0.5	1.9	0.6	NM	NM
INT-134	0.6	0.6	0.6	1.8	0.6	NM	NM
INT-135	0.6	0.8	0.6	6.8	0.7	0.2	0.4
INT-137	1.0	1.8	0.8	3.1	2.4	NM	NM
INT-138	0.8	0.8	0.4	2.3	0.6	NM	NM
INT-139	0.6	0.8	0.9	1.1	0.5	NM	NM
P-5	1.0	0.4	0.1	0.6	0.2	NM	NM
P-6	1.0	0.6	0.3	NM	NM	NM	NM
REI-10-2	1.2	0.8	0.4	1.1	0.2	NM	NM
REI-10-3	0.8	0.8	0.3	0.8	0.3	NM	NM
REI-12-2	0.8	2.0	NM	2.4	NM	NM	NM
S1-101	1.1	0.8	0.2	0.8	0.2	NM	NM
S1-102	1.6	0.6	0.4	0.5	0.2	0.3	0.2
S1-103	0.8	6.6	2.3	1.2	0.2	NM	NM
S1-104	1.6	0.8	1.8	3.9	15+	NM	NM
S1-105	15+	15+	0.2	1.4	6.8	NM	NM
S1-106	0.8	0.8	0.4	0.6	0.1	0.2	0.5
S1-107	5.4	15+	15+	15.0	15+	NM	NM
S1-108	1.6	0.0	0.6	15.0	15+	NM	NM
S1-109	8.4	15+	15+	5.2	15+	NM	NM
S1-110	1.3	1.4	0.6	0.6	0.2	NM	NM
S1-111	2.0	0.8	15+	15.0	15+	NM	NM
S1-112	0.6	1.4	0.7	2.4	0.2	NM	NM
S1-113	1.8	0.8	0.4	2.7	0.5	0.3	0.3

5.0 GROUNDWATER TREATMENT PLANT

5.1 Summary of Activities

In April, operations continued to adjust plant operating conditions to compensate for the lower flows as additional wells meeting criteria were turned off.

Two elevated total suspended solids values were reported as lower flows affected the backwashing capabilities of the sand filters. The automatic continuous backwashing rate is regulated by flow, and when flow is reduced again in the future, one filter will have to be taken out of service.

There have been no other issues for this reporting period.

There has been no carbon transfers this period.

Total flows for April, 1995:

Water discharged to the San Jacinto River - 4,637,100 gallons

Water discharged to the Lagoon - 0

Sludge discharged to the Lagoon - 25,975 gallons

Water processed through the GWT - 4,381,200 gallons

Water discharged to the South Pond - 0

Water blended passed Carbon Filter - 4,537,400 gallons

Water processed from Cell D to GWT plant: metered - 0

Cell D injection at S1-1 through S1-9: metered - 115,400 gallons

5.2 Inoculum/Nutrient Addition

The following have been introduced into the bioreactors/clarifier:

Nutrients:

310 gallons Diammonium Phosphate

Microbes:

16 oz. French Limited Isolated Microbes

Coagulant:

6.0 gallons Percol 778 Cationic Polymer

5.3 Maintenance

Table 5-1 lists the preventive maintenance items performed in April.

5.4 Operating Data

Table 5-2 summarizes the laboratory analysis of the treated water discharged to the San Jacinto River.

TABLE 5-1

Preventive Maintenance

Day	Action
April 3	Completed electrical safety inspection of all electrical tools and extension cords.
April 7	Checked belt tension and lubed blowers 1 and 2.
April 10	Exercised valves in GWT.
April 13	Replaced filters in central filter.
April 17	Lubed all pumps in GWT.
April 19	Lubed sump and water booster pumps in chemical storage.
April 23	Replaced filters in central filter.
April 24	Lubed chemical storage and west gates.

MONTHLY PROGRESS REPORT
Groundwater Treatment Plant

French Ltd. Project
FLTG, Incorporated

TABLE 5-2
Treated Water Results Summary

Collected	Set No.	pH		TSS		TOC		O&G		Benzene		Chlor HC's		Total PCBs		Naphthalene	
		(6-9)		5 PPM		55 PPM		15 PPM		150 PPB		500 PPB		0.65 PPB		300 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Jan-95	M03A0296	7.78		4.		12.9		2.5		5.		275.		.16		5.	
5-Jan-95	M03A0297	7.81		5.		19.		2.5		6.		249.		.16		5.	
9-Jan-95	M03A0298	7.8		7.		9.8		2.5		2.5		124.		.16		5.	
12-Jan-95	M03A0299	7.77		2.		9.8		2.5		2.5		200.		.16		5.	
16-Jan-95	M03A0300	7.61		4.		18.3		2.5		6.		393.		.16		5.	
19-Jan-95	M03A0301	7.44		2.		19.8		2.5		5.		454.		.16		5.	
23-Jan-95	M03A0302	7.82		9.		35.5		2.5		6.		192.		.16		5.	
26-Jan-95	M03A0303	7.66		.5		20.5		2.5		6.		234.		.16		5.	
30-Jan-95	M03A0304	7.15	7.6	4.	4.2	44.3	21.1	2.5	2.5	25.	7.1	2326.	494	.16	.16	5.	5.
2-Feb-95	M03A0305	7.28	7.6	.5	3.8	11.7	21.	2.5	2.5	6.	7.2	613.	532	.16	.16	5.	5.
6-Feb-95	M03A0306	7.55	7.6	1.	3.3	11.7	20.2	2.5	2.5	5.	7.1	411.	550	.16	.16	5.	5.
9-Feb-95	M03A0307	7.52	7.5	5.	3.1	8.8	20.	2.5	2.5	5.	7.4	226.	561	.16	.16	5.	5.
13-Feb-95	M03A0308	7.5	7.5	22.	5.3	9.7	20.	2.5	2.5	5.	7.7	349.	578	.16	.16	5.	5.
16-Feb-95	M03A0309	7.33	7.5	.5	4.9	5.2	18.6	2.5	2.5	5.	7.6	276.	565	.16	.16	5.	5.
20-Feb-95	M03A0310	7.37	7.5	6.	5.4	5.8	17.	2.5	2.5	4.	7.4	193.	536	.16	.16	5.	5.
23-Feb-95	M03A0311	7.29	7.4	1.	4.5	1.	13.2	2.5	2.5	2.5	7.1	60.	521	.16	.16	5.	5.
27-Feb-95	M03A0312	7.46	7.4	3.	4.8	9.5	12.	2.5	2.5	2.5	6.7	164.	513	.16	.16	5.	5.
2-Mar-95	M03A0313	7.47	7.4	.5	4.4	8.5	8.	2.5	2.5	2.5	4.2	145.	271	.16	.16	5.	5.
6-Mar-95	M03A0314	7.49	7.4	1.	4.4	8.1	7.6	2.5	2.5	2.5	3.8	128.	217	.16	.16	5.	5.
9-Mar-95	M03A0315	7.38	7.4	1.	4.4	8.	7.2	2.5	2.5	2.5	3.5	193.	193	.16	.16	5.	5.
13-Mar-95	M03A0316	7.64	7.4	5.	4.4	7.2	7.	2.5	2.5	2.5	3.22	111.	180	.16	.16	5.	5.
16-Mar-95	M03A0317	7.55	7.4	.5	2.1	6.	6.6	2.5	2.5	2.5	2.9	150.	158	.16	.16	5.	5.
20-Mar-95	M03A0318	7.41	7.5	.5	2.1	6.6	6.7	2.5	2.5	2.5	2.7	97.	138	.16	.16	5.	5.
23-Mar-95	M03A0319	7.45	7.5	1.	1.5	6.	6.8	2.5	2.5	2.5	2.5	185.	137.	.16	.16	5.	5.
27-Mar-95	M03A0320	7.83	7.5	3.	1.7	12.2	8.	2.5	2.5	6.	2.9	325.	166	.16	.16	5.	5.
30-Mar-95	M03A0321	7.47	7.5	7.	2.2	11.9	8.3	2.5	2.5	6.	3.3	342.	186	.16	.16	5.	5.
3-Apr-95	M03A0322	7.42	7.5	1.	2.2	11.7	8.6	2.5	2.5	6.	3.7	269.	200	.16	.16	5.	5.
6-Apr-95	M03A0323	7.45	7.5	2.	2.3	12.2	9.1	2.5	2.5	6.	4.1	239.	212	.16	.16	5.	5.
10-Apr-95	M03A0324	7.38	7.5	2.	2.4	11.1	9.4	2.5	2.5	6.	4.4	230.	216	.16	.16	5.	5.
13-Apr-95	M03A0325	7.62	7.5	3.	2.2	12.9	10.1	2.5	2.5	6.	4.8	364.	245	.16	.16	5.	5.
17-Apr-95	M03A0326	7.59	7.5	11.	3.4	12.9	10.8	2.5	2.5	6.	5.2	247.	255	.16	.16	5.	5.
20-Apr-95	M03A0327	7.75	7.55	1.	3.4	12.1	11.4	2.5	2.5	6.	5.6	226.	270	.16	.16	5.	5.
24-Apr-95	M03A0328	7.67	7.58	13.	4.8	13.	12.2	2.5	2.5	6.	6.	269.	279.	.16	.16	5.	5.
27-Apr-95	M03A0329	7.51	7.54	1.	4.6	12.2	12.2	2.5	2.5	2.5	5.6	236.	269	.16	.16	5.	5.
1-May-95	M03A0330	7.63	7.56														

Chlorinated hydrocarbons value is the sum of detected concentrations of 21 volatile chlorinated hydrocarbons on target compound list.

MONTHLY PROGRESS REPORT
Groundwater Treatment Plant

French Ltd. Project
FLTG, Incorporated

TABLE 5-2 (Continued)
Treated Water Results Summary

Collected	Set No.	As		Ba		Cd		Cr		Cu		Pb		Mn		Hg		Ni		Se		Ag		Zn	
		150 PPB		1000 PPB		50 PPB		500 PPB		15 PPB		66 PPB		300 PPB		1 PPB		148 PPB		20 PPB		5 PPB		162 PPB	
		Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg	Daily	R-Avg
2-Jan-95	M03A0296	9.9		172.		.1		2.1		1.6		.5		18.		.1		1.		1.2		.2		7.	
5-Jan-95	M03A0297	14.		151.		.1		3.		2.		.5		57.		.1		6.		1.2		.2		20.	
9-Jan-95	M03A0298	12.		171.		.1		.9		3.		.5		23.		.1		4.		1.3		.2		7.	
12-Jan-95	M03A0299	16.		143.		.1		.2		2.		.5		2.		.1		2.		1.3		.2		3.	
16-Jan-95	M03A0300	12.		146.		.1		.6		3.		.5		1.		.1		3.		1.3		.2		6.	
19-Jan-95	M03A0301	18.		135.		.1		.4		2.		.5		2.		.1		4.		1.3		.2		18.	
23-Jan-95	M03A0302	12.		140.		.1		.2		2.		.5		3.		.1		6.		1.3		.2		16.	
26-Jan-95	M03A0303	16.		148.		.1		.2		2.		.5		2.		.1		2.		1.3		.2		12.	
30-Jan-95	M03A0304	9.		238.		.1		.2		2.		.5		43.		.1		3.		1.3		.2		5.	
2-Feb-95	M03A0305	10.	13.2	192.	163	.1	.1	1.	.7	2.	2.2	.5	.5	15.	16.4	.1	.1	4.	3.8	1.3	1.2	.2	.2	8.	10.6
6-Feb-95	M03A0306	11.	12.9	188.	167	.1	.1	.2	.4	1.	2.1	.5	.5	4.	10.6	.1	.1	2.	3.3	1.3	1.3	.2	.2	5.	8.9
9-Feb-95	M03A0307	16.	13.3	195.	169	.1	.1	.2	.3	4.	2.2	.5	.5	6.	8.7	.1	.1	6.	3.6	1.3	1.3	.2	.2	11.	9.3
13-Feb-95	M03A0308	13.	13.	184.	174	.1	.1	2.	.5	1.	2.1	.5	.5	15.	10.1	.1	.1	5.	3.9	1.3	1.3	.2	.2	8.	9.9
16-Feb-95	M03A0309	12.	13.	184.	178	.1	.1	.2	.5	1.	1.9	.5	.5	6.	10.7	.1	.1	6.	4.2	1.3	1.3	.2	.2	7.	10.
20-Feb-95	M03A0310	14.	12.6	191.	184	.1	.1	2.	.7	2.	1.9	.5	.5	27.	13.4	.1	.1	8.	4.7	1.3	1.3	.3	.2	6.	8.7
23-Feb-95	M03A0311	13.	12.7	165.	187	.1	.1	1.	.8	2.	1.9	.5	.5	3.	13.4	.1	.1	8.	4.9	1.3	1.3	.2	.2	9.	7.9
27-Feb-95	M03A0312	22.	13.3	144.	187	.1	.1	4.5	1.2	3.	2.	.5	.5	3.	13.6	.1	.1	12.	6.	1.3	1.3	.5	.2	2.5	6.8
2-Mar-95	M03A0313	23.	14.9	133.	175	.1	.1	2.	1.4	1.	1.9	.5	.5	15.	10.4	.1	.1	8.	6.6	1.3	1.3	.5	.2	6.	6.9
6-Mar-95	M03A0314	17.	15.7	130.	168	1.	.2	1.	1.4	3.	2.	2.2	.7	3.	9.1	.1	.1	2.5	6.4	.5	1.2	.8	.3	8.	6.9
9-Mar-95	M03A0315	24.	17.1	111.	160	.1	.2	.2	1.4	.8	2.	.5	.7	4.	9.1	.1	.1	4.	6.6	1.3	1.2	.2	.3	6.	7.1
13-Mar-95	M03A0316	17.	17.2	121.	151	.1	.2	.2	1.4	1.	1.6	.5	.7	41.	13.	.1	.1	3.	6.3	1.3	1.2	.2	.3	5.	6.4
16-Mar-95	M03A0317	23.	18.3	114.	144	.1	.2	.3	1.3	3.	1.9	.5	.7	2.	11.6	.1	.1	3.	6.1	1.3	1.2	.2	.3	11.	6.7
20-Mar-95	M03A0318	18.	19.	112.	136	.1	.2	.2	1.3	3.	2.1	.5	.7	2.	11.1	.1	.1	2.	5.6	1.3	1.2	.2	.3	3.	6.3
23-Mar-95	M03A0319	19.	19.6	119.	128	.1	.2	.2	1.	2.	2.1	.5	.7	2.	8.3	.1	.1	3.	5.1	1.3	1.2	.2	.3	4.	6.1
27-Mar-95	M03A0320	14.	19.7	130.	124	.1	.2	3.	1.3	2.	2.1	.5	.7	22.	10.4	.1	.1	5.	4.7	1.3	1.2	.2	.3	40.	9.5
30-Mar-95	M03A0321	19.	19.3	132.	122	.1	.2	2.	1.	2.	2.	.5	.7	25.	12.9	.1	.1	6.	4.1	1.3	1.2	.2	.3	8.	10.1
3-Apr-95	M03A0322	17.	18.7	127.	122	.1	.2	.2	.8	2.	2.1	.5	.7	9.	12.2	.1	.1	1.	3.3	1.3	1.2	.2	.2	15.	11.1
6-Apr-95	M03A0323	23.	19.3	102.	119	.1	.1	.2	.7	1.	1.9	.5	.5	4.	12.3	.1	.1	1.	3.1	1.3	1.3	.2	.2	4.	10.7
10-Apr-95	M03A0324	12.	18.	157.	124	.1	.1	2.	.9	2.	2.	2.	.7	32.	15.4	.1	.1	4.	3.1	1.3	1.3	.2	.2	8.	10.9
13-Apr-95	M03A0325	44.	21.	107.	122	.1	.1	1.	1.	2.	2.1	.5	.7	11.	12.1	.1	.1	6.	3.4	1.3	1.3	.2	.2	3.	10.7
17-Apr-95	M03A0326	26.	21.3	171.	129	.1	.1	14.	2.5	2.	2.	1.	.7	108.	23.9	.1	.1	14.	4.7	1.3	1.3	.2	.2	17.	11.3
20-Apr-95	M03A0327	24.	22.	129.	130	.7	.2	7.	3.3	9.	2.7	2.	.9	43.	28.4	.1	.1	10.	5.6	1.3	1.3	.2	.2	34.	14.8
24-Apr-95	M03A0328	21.	22	115.	130.	.1	.2	7.	4.	1.	2.6	.5	.9	38.	32.4	.1	.1	6.	5.9	1.3	1.3	.2	.2	4.	14.8
27-Apr-95	M03A0329	24.	23.3	110.	128	.1	.2	2.	3.9	2.	2.6	.5	.9	12.	31.3	.1	.1	7.	6.1	1.3	1.3	.2	.2	9.	11.3

Metals values in PPB.

6.0 AMBIENT AIR MANAGEMENT

Ambient air quality management continued on an "as-needed" basis to protect the environment, human health, and site workers.

6.1 Summary of Activities

Collected and analyzed three time-integrated personnel exposure samples; the measured levels of volatile organic compounds were well below the action levels.

Sampled the ambient air in all work areas several times per shift and on a random "spot-check" basis; there were no levels of volatile organic compounds which required response action. Sampled ambient air in special work areas where burning and/or welding was planned. Sampled ambient air continuously in areas where exposure could occur and where confined space work occurred.

6.2 Problems and Response Action

<u>Problem</u>	<u>Response Action</u>
Calibrate portable vapor meters.	Train operators to calibrate; refurbish all meters.
Sampling "hot" wells.	Require respirator use when sampling "hot" wells.
Ambient air quality in all work areas.	Check all work areas with portable meter several times per day.
H ₂ S levels in some well vaults.	Vent vault and purge with air before working in the vaults.

6.3 Problems Resolved

None.

6.4 On-going Events/Activities

Measure ambient air quality in all work areas several times per day.

Conduct periodic time-integrated sampling in all major work areas.

Require respiratory protection when sampling "hot" wells.

Conduct necessary air sampling and analyses to issue "burn" permits.

Closely monitor ambient air quality in the vicinity of new projects/activities.

Conduct respirator fit tests on all employees.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

7.1 Summary of Activities

7.1.1 Sampling

One set of personal air monitoring samples were collected in April. The following is a summary of current routine and special air matrix code sample specifics:

MATRIX CODE	SAMPLE SPECIFICS
M01D	TF at three locations
TF = Tenax® front tube	

Table 7-1 is a summary of the air, soil and water samples collected during the month of April. Table 7-2 is a summary of Scheduled Sampling Events for the month of April.

7.1.2 Data Validation Activities Summary

7.1.2.1 Treated Water Samples

Data validation was completed for sample sets M03A0316, M03A0317, M03A0318, M03A0319, M03A0320, M03A0321, M03A0322 and M03A0323. These samples were collected between March 13, 1995 and April 6, 1995. QC failures are summarized in Table 7-3. Completeness values are summarized in Tables 7-4 through 7-8.

7.1.2.2 Groundwater Samples

Level I data validation was completed for the monthly groundwater monitoring sample sets collected in March and April. There were no significant QC failures found for the analytical data on these samples.

7.1.2.3 Other Samples

All other special sample sets were validated manually this period.

7.2 Data Validation QC Summary and Discussion

7.2.1 Level I and Level II QC Philosophy

The Quality Assurance Project Plan (QAPP) defines data validity in terms of procedural requirements which must be followed for data comparability, and numerical data quality objectives which must be met to assure precision and accuracy of the results. Precision, accuracy and completeness are the numerical Data Quality Objectives (DQOs) established for the French Project by the QAPP. The intent of the data validation process is to verify that the documentation and quality control data provided by the laboratory properly substantiate the required data quality.

For purposes of data validation procedures, the QAPP defines two QC levels: Level I and Level II. Level I data validation is specified for process control and progress monitoring sample data validation and Level II data validation is specified for remediation verification sample results and treated water discharge sample results.

MONTHLY PROGRESS REPORT
Quality Assurance/Quality Control

French Ltd. Project

FLTG. Incorporated

TABLE 7-1

Samples Collected - April, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M01D005501	Personal air monitoring	WTP Operator	4/12	4/13	N	A
M01D005502	Personal air monitoring	Well Maint.	4/12	4/13	N	A
M01D005503	Personal air monitoring	Security	4/12	4/13	N	A
M03A032201	Treated water discharge	CF Out	4/03	4/05	Y	A
M03A032301	Treated water discharge	CF Out	4/06	4/07	Y	A
M03A032401	Treated water discharge	CF Out	4/10	4/11	N	A
M03A032501	Treated water discharge	CF Out	4/13	4/13	N	A
M03A032601	Treated water discharge	CF Out	4/17	4/19	N	A
M03A032701	Treated water discharge	CF Out	4/20	4/21	N	A
M03A032801	Treated water discharge	CF Out	4/24	4/25	N	A
M03A032901	Treated water discharge	CF Out	4/27	4/28	N	A
M04A003101	Monthly GW monitoring	INT-111	4/01	4/03	Y	A
M04A003102	Monthly GW monitoring	INT-106	4/01	4/03	Y	A
M04A003103	Monthly GW monitoring	FLTG-007	4/01	4/03	Y	A
M04A003104	Monthly GW monitoring	S1-106	4/01	4/03	Y	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - April, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04A003105	Monthly GW monitoring	S1-123	4/01	4/03	Y	A
M04A003106	Monthly GW monitoring	INT-101	4/01	4/03	Y	A
M04A003107	Monthly GW monitoring	INT-112	4/01	4/03	Y	A
M04A003201	Monthly GW monitoring	INT-104	4/04	4/05	Y	A
M04A003202	Monthly GW monitoring	INT-141	4/04	4/05	Y	A
M04A003203	Monthly GW monitoring	INT-144	4/04	4/05	Y	A
M04A003204	Monthly GW monitoring	ERT-22	4/04	4/05	Y	A
M04A003205	Monthly GW monitoring	INT-110	4/04	4/05	Y	A
M04A003206	Monthly GW monitoring	INT-115	4/04	4/05	Y	A
M04B002901	Monthly GW monitoring	S1-102	4/02	4/03	Y	A
M04B002902	Monthly GW monitoring	S1-107	4/02	4/03	Y	A
M04B002903	Monthly GW monitoring	REI-10-3	4/02	4/03	Y	A
M04B002904	Monthly GW monitoring	S1-113	4/02	4/03	Y	A
M04B002905	Monthly GW monitoring	S1-050-P-2	4/02	4/03	Y	A
M04B002906	Monthly GW monitoring	S1-120	4/02	4/03	Y	A
M04B002907	Monthly GW monitoring	S1-127	4/02	4/03	Y	A
M04B003001	Monthly GW monitoring	S1-132	4/05	4/05	Y	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - April, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04B003003	Monthly GW monitoring	INT-119	4/05	4/05	Y	A
M04B003004	Monthly GW monitoring	INT-120	4/05	4/05	Y	A
M04B003006	Monthly GW monitoring	INT-127	4/05	4/05	Y	A
M04B003101	Monthly GW monitoring	S1-114	4/06	4/07	Y	A
M04B003102	Monthly GW monitoring	S1-109	4/06	4/07	Y	A
M04B003103	Monthly GW monitoring	INT-123	4/06	4/07	Y	A
M04B003104	Monthly GW monitoring	REI-10-2	4/06	4/07	Y	A
M04C002101	Monthly GW monitoring	INT-111	4/02	4/03	Y	A
M04C002102	Monthly GW monitoring	INT-106	4/02	4/03	Y	A
M04C002103	Monthly GW monitoring	FLTG-007	4/02	4/03	Y	A
M04C002104	Monthly GW monitoring	S1-106	4/02	4/03	Y	A
M04C002105	Monthly GW monitoring	S1-123	4/02	4/03	Y	A
M04C002106	Monthly GW monitoring	INT-101	4/02	4/03	Y	A
M04C002107	Monthly GW monitoring	INT-112	4/02	4/03	Y	A
M04C002401	Monthly GW monitoring	INT-104	4/04	4/05	Y	A
M04C002402	Monthly GW monitoring	INT-141	4/04	4/05	Y	A
M04C002403	Monthly GW monitoring	INT-144	4/04	4/05	Y	A

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-1

Samples Collected - April, 1995

Sample No.	Description	Location	Date Samp'd	Lab Rec'd	Data Rec'd	Lab
M04C002404	Monthly GW monitoring	ERT-22	4/04	4/05	Y	A
M04C002405	Monthly GW monitoring	INT-110	4/04	4/05	Y	A
M04C002406	Monthly GW monitoring	INT-115	4/04	4/05	Y	A
M06C002601	Monthly process water	T-101 Eff	4/06	4/06	Y	A
M06C002602	Monthly process water	T-101 Inf	4/06	4/06	Y	A
M06C002603	Monthly process water	R1	4/06	4/06	Y	A
M06C002604	Monthly process water	R2	4/06	4/06	Y	A
M06C002605	Monthly process water	Cell D Liqr	4/06	4/06	Y	A
S14B000401	North well monitoring	GW-5	4/24	4/25	N	A
S14B000402	North well monitoring	GW-12	4/24	4/25	N	A
S14B000403	North well monitoring	GW-13	4/24	4/25	N	A
S17A000501	Wetlands sludge	SE Corner	4/10	4/11	N	A
S17A000601	Wetlands sludge	SE Corner	4/10	4/11	N	K

Labs: A = American Analytical and Technical Services
N = North Water District Lab
K = Chester LabNet-Houston

TABLE 7-2

Scheduled Sampling Events
April, 1995

<u>Date Sampled</u>	<u>Set Number</u>	<u>Description</u>	<u>Schedule</u>
4/01/95	M04A0031	Monthly GW monitoring	Monthly
4/04/95	M04A0032	Monthly GW monitoring	Monthly
4/02/95	M04B0029	Monthly GW monitoring	Monthly
4/05/95	M04B0030	Monthly GW monitoring	Monthly
4/06/95	M04B0031	Monthly GW monitoring	Monthly
4/02/95	M04C0021	Monthly GW monitoring	Monthly
4/04/95	M04C0022	Monthly GW monitoring	Monthly
4/04/95	M04C0023	Monthly GW monitoring	Monthly
4/04/95	M04C0024	Monthly GW monitoring	Monthly
4/06/95	M06C0026	Monthly process water	Monthly
4/24/95	S14B0004	North GW wells	Monthly
4/12/95	M01D0055	Personal air monitoring	Monthly
4/03/95	M03A0322	Treated water discharge	Bi-weekly
4/06/95	M03A0323	Treated water discharge	Bi-weekly
4/10/95	M03A0324	Treated water discharge	Bi-weekly
4/13/95	M03A0325	Treated water discharge	Bi-weekly
4/17/95	M03A0326	Treated water discharge	Bi-weekly
4/20/95	M03A0327	Treated water discharge	Bi-weekly
4/24/95	M03A0328	Treated water discharge	Bi-weekly
4/27/95	M03A0329	Treated water discharge	Bi-weekly
4/10/95	S17A0005	Wetlands sludge	Special
4/10/95	S17A0006	Wetlands sludge	

TABLE 7-3

Treated Water QC Failure Summary

Sample Date	Test	QC Failure	Explanation	Corrective Action
03/13/95	Mn	ICP Serial Dilution	ICP serial dilution indicated interference.	None required - LCS, Dup and Spike were within QC limits.
03/16/95	Ba	ICP Serial Dilution	ICP serial dilution indicated interference.	None required - LCS, Dup and Spike were within QC limits.
03/30/95	SV	Su Recov.	Surrogate Tribromophenol was outside QC limits on sample -01 and -01 MS and -01 MSD.	None required - 1 base/neutral and 1 acid surrogate are allowed to be outside QC limits. Matrix effect is indicated.
03/30/95	Mn	Dup. Prec.	Duplicate RPD was outside control limits.	None required - LCS and Spike were within control limits.
04/03/95	SV	Su Recov.	Surrogate Tribromophenol was outside QC limits on sample -01 and -01 MS and -01 MSD.	None required - 1 base/neutral and 1 acid surrogate are allowed to be outside QC limits. Matrix effect is indicated.
04/06/95	SV	Su Recov.	Surrogate Tribromophenol was outside QC limits on sample -01.	None required - 1 base/neutral and 1 acid surrogate are allowed to be outside QC limits.

7.2.3 Completeness Summaries

Tables 7-4 through 7-8 summarize completeness values for VOA, SVA, PCBs, Metals and miscellaneous parameters on treated water samples.

/

VOA (Table 7-4)

A total of 8 VOA sample sets have been validated with all categories meeting Project Completeness Goals.

SVA (Table 7-5)

A total of 8 SVA sample sets have been validated for this time period. All categories meet or exceed Project Completeness Goals with the exception of sample matrix effect. This is due to matrix effect failures in the early stages of the project and the MS/MSD accuracy failures that occurred during September and October 1994.

PCBs (Table 7-6)

A total of 8 PCB sample sets have been validated for this time period with all samples, meeting data quality objectives. All categories meet or exceed Project Completeness Goals.

Metals (Table 7-7)

A total of 8 sample sets have been validated for this time period. Project Completeness Goals are met or exceeded in all categories.

Miscellaneous Parameters (Table 7-8)

A total of 8 sample sets have been validated for this time period. Project completeness goals are met or exceeded in all categories.

TABLE 7-4

Completeness Summary
M03A Treated Water
Volatile Organics Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	Project to Date	PROJECT GOAL
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check	100	94	90
SU1 (d4-1,2-DCE)	100	97	90
SU2 (d8-Toluene)	100	98	90
SU3 (4-BFB)	100	99	90
IS Check	100	100	90
IS1 (BrClMethane)	100	100	90
IS2 (1,4-DiFiBenzene)	100	100	90
IS3(d5-ClBenzene)	100	100	90
Sample RT/RRT Check	100	*	
Vinyl Chloride			
Accuracy	100	99	90
Precision	100	99	90
Benzene			
Accuracy	100	99	90
Precision	90	100	90
No Group Matrix Effect	100	*	90
No Sample Matrix Effect	100	*	90
Tune Check	100	*	
Overall ICAL Check	100	*	
Overall CCAL Check	100	*	
Overall Lab Blank Check	100	*	

* - Level II QC checks were performed on 10% of samples prior to 6/14/93.
PTD completeness values do not apply to these checks.

TABLE 7-5

Completeness Summary
M03A Treated Water
Semivolatile Organic Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	Project to Date	PROJECT GOAL
Extract Holding Time	100	100	100
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check	100	95	90
SU1 (2-FIPhenol)	100	95	90
SU2 (d5-Phenol)	100	94	90
SU3 (d5-Nitrobenz)	100	96	90
SU4(2-FIBiphenyl)	100	98	90
SU5(2,4,6-TBPh)	100	94	90
SU6(d14-Terphen)	75	94	90
IS Check	100	98	90
IS1 (d4-1,4-DiClBenz)	100	100	90
IS2 (d8-Naph)	100	100	90
IS3 (d10-Acenaph)	100	100	90
IS4 (d10-Phenanth)	100	100	90
IS5 (d12-Chrysene)	90	97	90
IS6 (d12-Perylene)	100	96	90
Sample RT/RRT	100	*	*
Napthalene			
Accuracy	100	96	90
Precision	100	99	90
No Group Matrix Effect	100	99	90
No Sample Matrix Effect	100	89	90
Tune Check	100	*	*
Overall ICAL Check	100	*	*
Overall CCAL Check	100	*	*
Overall Lab Blank Check	100	*	*

* - Level II QC checks were performed on 10% of samples prior to 6/14/93.
PTD completeness values do not apply to these checks.

TABLE 7-6

Completeness Summary
M03A Treated Water
PCB Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	Project to Date	PROJECT GOAL
Extract Holding Time	100	100	100
Analysis Holding Time	100	100	100
12 Hour Window	100	100	100
SU Check - Column A	100	99	90
SU1 (DCBP)	100	88	NS
SU2 (TCMX)	100	97	NS
SU Check - Column B	100	98	90
SU1 (DCBP)	100	87	NS
SU2 (TCMX)	100	97	NS
SU Check - Column A or B	100	98	90
Aroclor 1242			
Accuracy	100	99	90
Precision	100	97	90
Overall ICAL Check	100	*	
Overall 1st CCAL Check	100	*	
Overall 2nd CCAL Check	100	*	
Overall Lab Blank Check	100	*	

* - Level II QC checks were performed on 10% of samples prior to 6/14/93.
PTD completeness values do not apply to these checks.

TABLE 7-7

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE M03A0316 thru PROJECT GOAL
SET NUMBER M03A0323

ANALYTE: BARIUM

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	88	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: CADMIUM

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: CHROMIUM

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: COPPER

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: LEAD

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:

Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-7 (Continued)

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	PROJECT GOAL
---------------------------	---------------------------	--------------

ANALYTE: MANGANESE

MS Accuracy	100	95
DUP Precision/Difference	88	95
No Matrix Interference*	75	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: NICKEL

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: SILVER

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: ZINC

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: MERCURY

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:
Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-7 (Continued)

Completeness Summary
M03A Treated Water
Metals Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	PROJECT GOAL
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ANALYTE: ARSENIC

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

ANALYTE: SELENIUM

MS Accuracy	100	95
DUP Precision/Difference	100	95
No Matrix Interference*	100	NA
Prep Blank Check	100	100
Lab Control Spike Check	100	100

W - All samples waived due to low response

* Matrix interference is indicated by:

Furnace analyses - failure of analytical spike or low MSA coefficient
ICP analyses - failure of serial dilution

TABLE 7-8

Completeness Summary
M03A Treated Water
Miscellaneous Parameters Analyses

SAMPLE DATE SET NUMBER	M03A0316 thru M03A0323	Project to Date	PROJECT GOAL
PARAMETER: TOC			
Analysis Hold Time	100	100	100
MS Accuracy	100	100	NA
DUP Precision	100	100	NA
PARAMETER: OILS			
Analysis Hold Time	100	100	100
MS Accuracy	100	100	NA
DUP Precision	100	100	NA
PARAMETER: TSS			
Analysis Hold Time	100	100	100
MS Accuracy	NA	NA	NA
DUP Precision	100	100	NA

8.0 SITE MAINTENANCE

8.1 Summary of Activities

8.1.1 General Housekeeping

The site safety and housekeeping inspections and responses kept grounds safe and attractive for employees and visitors.

8.1.2 Purchasing

All purchases were covered by written requisitions and purchase orders. Purchase of chemicals is now reduced to groundwater treatment and insitu remediation.

A contract was awarded to American Parking Control for driveway repair and repair of Gulf Pump Road.

8.1.3 Equipment Maintenance

Routine preventive and production maintenance was performed on all equipment.

8.2 Visitors

The following visitors were recorded at the site during April:

April 5: Greg Crouch, Crouch Environmental

April 11: (b) (6) Crosby ISD
(b) (6) Crosby ISD
(b) (6) Crosby ISD
Johnny Rombs, LTT
Karl A. Christen, LTT
Frank Spicer, LTT
Greg Crouch, Crouch Environmental

D. Licatino, ARJ
Burt Campbell, PMCI
Carla Williams, PMCI
S. Birdwell, Remedial
James Sher, TNRCC
Jim Thomson, AHA
Judith Black, EPA
Stephanie Hrabar, GEMS²
Lynne Johnson, GEMS²

April 12: (b) (6) Crosby ISD

April 16: Ron Callahan, Strawn
Nolan Hebert, Strawn

April 17: Warren Fray, Argo
Stephanie Hrabar, GEMS²
All Klaveness, KRC
Bill Jones, B.R. Jones Assoc.
H.C. Clark, Bay Hill
Ron Callahan, Strawn
Nolan Hebert, Strawn
Walter Turpening, Elohi Geophy
Chip Boxley, Texas Trees
Ken Kirsch, Interstate Trees

April 18: Mike Webb, LAN
Phil Meaders, LAN
Terry Van Nay, LAN
James Sher, TNRCC
Earl Hendrick, EPA
Jeff Herman, ALH Ind.

April 19: Vyacheslav G. Dzybenko, Letco

April 20: John Vincent, SWC

April 21: Thelma Waitkus, resident
Rhonda Cordray, Office and Data Services

April 24: Mike Webb, LAN

April 26: Don Walters, EPA

April 27: Mike Webb, LAN
Judith Black, EPA
Sam Becker, EPA
Carl Edleevel, EPA
B.R. Schuster, ACC

April 27: EPA/TNRCC Open House

Carl Edleevel	(b) (6)
Judith Black	(b) (6)
Barbara Ferguson	(b) (6)
Amy Lange	Ken Miller
(b) (6)	(b) (6)
David Bary	(b) (6)
(b) (6)	Larry Brown
Jim Feeley	(b) (6)
Hoyt Clark	(b) (6)
(b) (6)	(b) (6)
Sam Becker	(b) (6)
(b) (6)	Donn Walters
(b) (6)	Bebe Burns
(b) (6)	(b) (6)
Theresa Lamson	(b) (6)
(b) (6)	

8.3 Emergency Equipment

8.3.1 Flood Gate Test

The flood gate was exercised on April 23, 1995, with no leaks detected.

8.3.2 P-8 Auxiliary Pump

P-8 Auxiliary Pump has been converted to the lagoon ground cover vegetation sprinkler source. It has operated approximately 40 hours in April.

8.3.3 Fire Extinguishers

All fire extinguishers were inspected and certified.

8.4 Security

Smith Security provides 24-hour security at the FLTG site, including the south side of Gulf Pump Road; all site areas are checked hourly. No incidents reported by Security in April. Additional security was contracted to Harris County Precinct #2 for traffic control during the EPA/TNRCC Open House on April 27, 1995.

8.5 Operator Training

All training is documented and records are maintained on site.

8.6 Data Management

Data base is fully operational. Data is entered on a daily basis.

8.7 Personnel Monitoring

Results of personnel monitoring conducted during April are included in Table 8-1.

8.8 OVM System

Work areas are being monitored daily with Organic Vapor Monitor 580A.

8.9 Repository

Records from the April review are listed in Attachment 8A.

8.10 Meteorological Data

The new meteorological station is operational. Data is generated on a weekly basis.

Rainfall data is listed in Table 8-2.

TABLE 8-1

On-Site Employee Contaminant Limits
(From OSHA 29 CFR 1910 Subpart Z)

Compound	PEL 8 hour PPM	1 12-Apr-95 Maint. (F.L.)		2 12-Apr-95 WTP Oper (E.O.)		3 12-Apr-95 WTP Oper (C.A.)	
		% of PEL	PPM	% of PEL	PPM	% of PEL	PPM
Chloromethane	50	0.000	0.000	0.003	0.001	0.001	0.001
Bromomethane	5	0.000	0.000	0.004	0.000	0.002	0.000
Vinyl chloride	1	0.000	0.000	0.000	0.000	0.000	0.000
Chloroethane	1000	0.000	0.000	0.000	0.000	0.000	0.000
Dichloromethane	50	0.001	0.000	0.007	0.003	0.002	0.001
Acetone	750	0.002	0.012	0.001	0.010	0.002	0.015
Carbon disulfide	10	0.000	0.000	0.000	0.000	0.000	0.000
1,1-Dichloroethene	5	0.037	0.002	0.000	0.000	0.000	0.000
1,1-Dichloroethane	100	0.000	0.000	0.000	0.000	0.000	0.000
trans-1,2-Dichloroethene	200	0.000	0.000	0.001	0.003	0.000	0.001
Chloroform	10	0.003	0.000	0.028	0.003	0.053	0.005
1,2-Dichloroethane	10	0.002	0.000	0.020	0.002	0.035	0.003
2-Butanone	200	0.022	0.043	0.002	0.004	0.004	0.008
1,1,1-Trichloroethane	350	0.010	0.037	0.000	0.001	0.001	0.002
Carbon Tetrachloride	5	0.003	0.000	0.030	0.002	0.111	0.006
Vinyl acetate	10	0.002	0.000	0.000	0.000	0.005	0.000
Bromodichloromethane			0.000		0.000		0.000
1,2-Dichloropropane	75	0.000	0.000	0.000	0.000	0.000	0.000
cis-1,3-Dichloropropene	1	0.000	0.000	0.000	0.000	0.000	0.000
Trichloroethene	50	0.000	0.000	0.000	0.000	0.000	0.000
Dibromochloromethane			0.000		0.000		0.000
1,1,2-Trichloroethane	10	0.000	0.000	0.000	0.000	0.000	0.000
Benzene	1	0.086	0.001	0.112	0.001	0.178	0.002
trans-1,3-Dichloropropene	1	0.000	0.000	0.000	0.000	0.000	0.000
2-Chloroethylvinyl ether			0.000		0.000		0.000
Bromoform	0.5	0.000	0.000	0.000	0.000	0.000	0.000
4-Methyl-2-pentanone	50	0.000	0.000	0.000	0.000	0.001	0.001
2-Hexanone	5	0.000	0.000	0.000	0.000	0.004	0.000
Tetrachloroethene	50	0.000	0.000	0.001	0.000	0.007	0.003
1,1,2,2-Tetrachloroethane	1	0.000	0.000	0.000	0.000	0.000	0.000
Toluene	100	0.000	0.000	0.001	0.001	0.002	0.002
Chlorobenzene	10	0.000	0.000	0.000	0.000	0.000	0.000
Ethylbenzene	100	0.000	0.000	0.000	0.000	0.000	0.000
Styrene	50	0.000	0.000	0.000	0.000	0.000	0.000
Xylene (total)	100	0.000	0.000	0.000	0.000	0.001	0.001
Hexane			0.001		0.002		0.003

TABLE 8-2

Rainfall Data for April, 1995

Date Sampled	Daily Rainfall
04/01/95	0.00
04/02/95	0.00
04/03/95	0.00
04/04/95	0.00
04/05/95	0.00
04/06/95	0.01
04/07/95	0.00
04/08/95	0.01
04/09/95	0.00
04/10/95	0.43
04/11/95	0.00
04/12/95	0.00
04/13/95	0.00
04/14/95	0.01
04/15/95	0.00
04/16/95	0.00
04/17/95	0.00
04/18/95	0.00
04/19/95	0.01
04/20/95	0.87
04/21/95	0.01
04/22/95	0.01
04/23/95	0.02
04/24/95	0.00
04/25/95	0.00
04/25/95	0.01
04/27/95	0.00
04/28/95	0.00
04/29/95	0.00
04/30/95	0.00
Total	1.39

ATTACHMENT 8A

Repository Status Report: April, 1995

REPOSITORY STATUS REPORT: April, 1995

At the Rice University Library...

1. Remedial Investigation Report April, 1985
2. Remedial Investigation Report Appendices, Volume II, April, 1985
3. Remedial Investigation Report June, 1986 (Updated from April, 1985)
4. Remedial Investigation Report Appendices, Volume I, February, 1986
(Revised June, 86)
5. Remedial Investigation Report Appendices, Volume II, February, 1986
(Revised June, 1986)
6. Remedial Investigation Report Appendices, Volume III, February, 1986
7. 1986 Field Investigation and Supplemental Remedial Investigation Report Volume I, December, 1986
8. 1986 Field Investigation and Supplemental Remedial Investigation Report French Limited Site Volume II, Appendices December, 1986
9. 1986 Field Investigation Hydrology Report, December 19, 1986
10. Endangerment Assessment Report February, 1987
11. Endangerment Assessment Report April 1987 (Updated from February, 1987)
12. Feasibility Study Report, March 1987
13. In Situ Biodegradation Demonstration Report Volume I Executive Summary, October 30, 1987 Revised 11-11-87
14. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume I, November 30, 1987
15. In Situ Biodegradation Demonstration Report Volume II, October 30, 1987
(Revised February 1, 1988 at Site only)
16. In Situ Biodegradation Demonstration Supplemental Report French Limited Site Volume II, November 30, 1987 + Appendices

17. In Situ Biodegradation Demonstration Report Volume III Appendices, October 30, 1987
18. In Situ Biodegradation Demonstration Report Volume III, Appendices, Supplemental Report, November 30, 1987
19. In Situ Biodegradation Demonstration Report French Limited Site, Volume IV October 30, 1987 + Appendices
20. In Situ Biodegradation Demonstration Supplemental Report French Limited Site, Volume IV November 30, 1987 + Appendices
21. In Situ Biodegradation Demonstration Report French Limited Site Volume V, October 30, 1987
22. In Situ Biodegradation Demonstration Report French Limited Site Volume V Appendices, November 30, 1987 - Supplemental Report
23. In Situ Biodegradation Demonstration Report French Limited Site Volume VI Appendices, October 30, 1987
24. In Situ Biodegradation Demonstration Report French Limited Site Volume VII Appendices, October 30, 1987
25. In Situ Biodegradation Demonstration Report French Limited Site Volume VIII Appendices, October 30, 1987
26. In Situ Biodegradation Demonstration Report French Limited Site Volume IX Appendices, October 30, 1987
27. In Situ Biodegradation Demonstration Report French Limited Site Volume X Appendices, October 30, 1987
28. In Situ Biodegradation Demonstration Report French Limited Site Volume XI Appendices, October 30, 1987
29. In Situ Biodegradation Demonstration Report French Limited Site Volume XII Appendices, October 30, 1987
30. In Situ Biodegradation Demonstration Report French Limited Site Volume XIII Appendices, October 30, 1987
31. In Situ Biodegradation Demonstration Report French Limited Site Volume XIV Appendices, October 30, 1987

32. In Situ Biodegradation Demonstration Report French Limited Site Volume XV Appendices, October 30, 1987
33. In Situ Biodegradation Demonstration Report French Limited Site Volume XVI Appendices, October 30, 1987
34. In Situ Biodegradation Demonstration Report French Limited Site Volume XVII Appendices, October 30, 1987
35. In Situ Biodegradation Demonstration Report French Limited Site Volume XVIII Appendices, October 30, 1987
36. Proposed In Situ Biodegradation Demonstration French Limited Site Phase III, April, 1987
37. In Situ Bioremediation Demonstration French Limited April, 1987 Monthly Report, Equipment Evaluation Phase IV
38. In Situ Bioremediation Demonstration French Limited May, 1987 Monthly Report, Equipment Evaluation Phase IV
39. In Situ Bioremediation Demonstration French Limited June, 1987 Monthly Report, Equipment Evaluation Phase IV
40. In Situ Bioremediation Demonstration French Limited July, 1987 Monthly Report, Equipment Evaluation Phase IV
41. In Situ Bioremediation Demonstration French Limited August, 1987 Monthly Report, Equipment Evaluation Phase IV
42. In Situ Bioremediation Demonstration French Limited November, 1987 Monthly Report, Equipment Evaluation Phase IV
43. In Situ Bioremediation Demonstration French Limited December, 1987 Monthly Report, Equipment Evaluation Phase IV
44. In Situ Bioremediation Demonstration French Limited January, 1988 Monthly Report, Equipment Evaluation Phase IV
45. In Situ Bioremediation Demonstration French Limited February, 1988 Monthly Report, Equipment Evaluation Phase IV
46. In Situ Bioremediation Demonstration French Limited March, 1988 Monthly Report, Equipment Evaluation Phase IV

47. In Situ Bioremediation Demonstration French Limited April, 1988 Monthly Report, Equipment Evaluation Phase IV
48. In Situ Biodegradation Demonstration French Limited May/June 1988 Monthly Report, Equipment Evaluation Phase IV
49. In Situ Bioremediation Demonstration French Limited July, 1988 Monthly Report, Equipment Evaluation Phase IV
50. In Situ Bioremediation Demonstration French Limited August, 1988 Monthly Report, Equipment Evaluation Phase IV
51. In Situ Bioremediation Demonstration French Limited September, 1988 Monthly Report, Equipment Evaluation Phase IV
52. Supplemental Biodegradation Equipment Evaluation French Limited Site - Phase IV, September 26, 1988
53. In Situ Biodegradation Demonstration Phase III Quality Assurance Project Plan for French Limited Site, March, 1987
54. Addendum to Quality Assurance Project Plan for the French Limited Site In Situ Biodegradation Demonstration Phase III, February 16, 1990
55. Site Safety and Health Plan French Limited Site - Phase III, April 1987 (Revision 2)
56. Remedial Action Plan Volume I - April, 1990
57. Remedial Action Plan Volume I - September, 1990 (Updated from April, 1990)
58. Remedial Action Plan Volume II Quality Assurance April, 1990
59. Remedial Action Plan Volume II Quality Assurance September, 1990 (Updated from April 1990) Revised June 3, 1991
60. Remedial Action Plan Volume II Quality Assurance June, 1990
Appendix A - Quality Assurance Sampling Procedures and
Appendix B - Analytical Methods - B.1 - B.53, September 22, 1989
Revised September 28, 1990
61. Remedial Action Plan Volume III - Health and Safety, July 20, 1990

- 62. Remedial Action Plan Volume IV - Spill and Volatile Organic Release Contingency Plan (April 6, 1990)
- 63. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, May, 1990
Page v.i.3 Missing
- 64. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990, (Updated from May, 1990)
- 65. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume I, February 1, 1990
- 66. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume II, February 1, 1990
- 67. 1988 Slough Investigation Report French Limited Site, October 1988
- 68. Ambient Air Impact Risk Assessment Report, May 5, 1989
- 69. Workplan for the Shallow Aquifer Pumping Tests for the French Limited Site, July 22, 1988
Page 80 Missing
- 70. French Limited Site Hurricane Gilbert Preparation Report, October, 1988
- 71. Potable Water Well Installation Report French Limited Site, December 7, 1988
- 72. Bioresidue Fixation Alternatives Evaluation Report French Limited Site March 20, 1989
- 73. Hydrogeologic Characterization Report, March 1989
- 74. Hydrogeologic Characterization Report - Appendices, March 1989
- 75. San Jacinto River May 19, 1989 Flood Event Report, June 1989
- 76. Post San Jacinto River May 1989 Flood Event Soils and Water Analysis Program - Volume I, August 16, 1989
- 77. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume II Appendix A

- 78. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program
Volume III Appendix A, August 16, 1989
- 79. Riverdale Lake Area Remediation Program August 15, 1989
- 80. Flood and Migration Control Wall Design Report, August 16, 1989
- 81. Flood and Migration Control Wall Design Report Appendix C Access Way Design,
September, 1989
- 82. North Pit Remediation Report French Limited Site, November 6, 1989
- 83. Installation Report for Flood and Migration Control Wall, January 8, 1990
- 84. Installation Report for Flood and Migration Control Wall
Appendix A - ENSR Site Logs
- 85. Installation Report for Flood and Migration Control Wall
Appendix B - Inspection Reports
- 86. Installation Report for Flood and Migration Control Wall Appendix C - Pile Driving
Inspection Report January 8, 1990
- 87. Flood Wall Gate Test Report French Limited Site, February 1990
- 88. French Limited Remediation Design Report - Executive Summary
Bioremediation/Shallow Aquifer, July, 1991
- 89. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume I of III -
Summary Report and Appendices A-H, July 1991
- 90. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume II of III
- Appendices I-M, June 1991
- 91. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume III of III
- Appendices N-P, June 1991
- 92. Bioremediation Facilities Design Report Volume II of IV Appendices, Reports and
Calculations (March 20, 1991)
- 93. Bioremediation Facilities Design Report Volume III of IV
Appendix E - Design Specifications (March 20, 1991)

94. Bioremediation Facilities Design Report Volume IV of IV - Air Monitoring, March 20, 1991
95. Public Health Assessment for French Limited March 30, 1993 from U.S. Department of Health and Human Services
96. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 1, Report, Appendices A-E
97. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 2, Appendix F
98. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 3, Appendix F continued
99. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 4, Appendix G
100. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 5, Appendix H
101. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 6, Appendix H continued
102. Record of Public Meeting Regarding Remedial Investigation and Feasibility Study (5-21-87)
103. Summary of Remedial Alternative Selection 1988
104. Declaration for the Record of Decision 1988
105. Record of Public Meeting Regarding Remedial Investigation and Feasibility Study (2-11-88) (Updated from June 21, 1987)
106. Consent Decree between the Federal Government and the FLTG
107. French Limited Superfund Site Community Relations Revised Plan August, 1989 - Jacob's Engineering
108. Results of the French Limited Task Group Survey (Goldman and Company) April, 1987
109. Goldman Public Relations Clipping Report

- 110. BioGEE International, Inc., Project Report Biotreatability Study Using Isolated Indigenous Organisms, April, 1994
- 111. Field Evaluation of Biodegradation at the French Limited Site (Phase II) Volume I
- 112. Laboratory Evaluation of Biodegradation at the French Limited Site
- 113. French Limited Site Focused Feasibility Study (May 1987)
- 114. Annual Groundwater Monitoring Report, December 1993, Report and Appendices A-B
- 115. Annual Groundwater Monitoring Report, December 1993, Appendices C-H
- 116. DNAPL Study Remedial Alternative Selection and Feasibility Study Report, November 1994
- 117. Cell E and Cell D/F Remediation Verification Report
- 118. French Limited Wetlands Mitigation, Final Site Restoration Plan
- 119. French Limited Wetlands Mitigation, Site Selection Report
- 120. French Limited Wetlands Mitigation, 404 and 401 Permit Application, U.S. Army Corps of Engineers, Galveston, TX
- 121. Quality Assurance Report, February 15, 1993, Report No. QA93003
- 122. Quality Assurance Report, January 20, 1994, Report No. QA94001
- 123. Environmental Protection Agency, Region VI, Hazardous Waste Management Division, First Five Year Review (Type Ia), CERCLIS TXD-980514814, December 1994
- 124. ARCS, French Limited Site 1993, Annual Groundwater Sampling and Comparison Report, CH2M Hill, January, 1995
- 125. Annual Groundwater Monitoring Report, December, 1994, Report and Appendices A-G
- 126. Monthly Progress Report, January 1992
- 127. Monthly Progress Report, January, 1992 Appendices A-C

- 128. Monthly Progress Report, January, 1992 Appendices E, F
- 129. Monthly Progress Report, January, 1992 Appendices G
- 130. Monthly Progress Report, February, 1992
- 131. Monthly Progress Report, February, 1992 Appendices A-B
- 132. Monthly Progress Report, February, 1992 Appendices C 1
- 133. Monthly Progress Report, February, 1992 Appendices C 2
- 134. Monthly Progress Report, February, 1992 Appendices D-E
- 135. Monthly Progress Report, March, 1992
- 136. Monthly Progress Report, March, 1992, Appendix A
- 137. Monthly Progress Report, April, 1992
- 138. Monthly Progress Report, April, 1992, Appendices A-B
- 139. Monthly Progress Report, May, 1992
- 140. Monthly Progress Report, May, 1992, Appendices A-B
- 141. Monthly Progress Report, June, 1992
- 142. Monthly Progress Report, June, 1992, Appendices A-B
- 143. Monthly Progress Report, July 1992
- 144. Monthly Progress Report, July 1992, Appendices A-B
- 145. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 1 of 3
- 146. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 2 of 3
- 147. Monthly Progress Report, July 1992, Appendices B1-B22 Vol. 3 of 3
- 148. Monthly Progress Report, August, 1992
- 149. Monthly Progress Report, August, 1992, Appendices A-B

- 150. Monthly Progress Report, September, 1992
- 151. Monthly Progress Report, September, 1992, Appendices A-B
- 152. Monthly Progress Report, October, 1992
- 153. Monthly Progress Report, October, 1992, Appendices A-B
- 154. Monthly Progress Report, November, 1992
- 155. Monthly Progress Report, November, 1992 Appendices A-B
- 156. Monthly Progress Report, December, 1992
- 157. Monthly Progress Report, December, 1992 Appendices A, B
- 158. Monthly Progress Report, January, 1993
- 159. Monthly Progress Report, February, 1993
- 160. Monthly Progress Report, March, 1993
- 161. Monthly Progress Report, April, 1993
- 162. Monthly Progress Report, May, 1993
- 163. Monthly Progress Report, June, 1993
- 164. Monthly Progress Report, July, 1993
- 165. Monthly Progress Report, August, 1993
- 166. Monthly Progress Report, September, 1993
- 167. Monthly Progress Report, October, 1993
- 168. Monthly Progress Report, November, 1993
- 169. Monthly Progress Report, December, 1993
- 170. Monthly Progress Report, January, 1994
- 171. Monthly Progress Report, February, 1994

- 172. Monthly Progress Report, March, 1994
- 173. Monthly Progress Report, April, 1994
- 174. Monthly Progress Report, May, 1994
- 175. Monthly Progress Report, June, 1994
- 176. Monthly Progress Report, July, 1994
- 177. Monthly Progress Report, August, 1994
- 178. Monthly Progress Report, September, 1994
- 179. Monthly Progress Report, October, 1994
- 180. Monthly Progress Report, November, 1994
- 181. Monthly Progress Report, December, 1994
- 182. Monthly Progress Report, January, 1995
- 183. Monthly Progress Report, February, 1995
- 183. Monthly Progress Report, March, 1995

At the Crosby library...

1. Remedial Investigation Report - June, 1986
2. Remedial Investigation Appendices Volume I June, 1986 Revised from Feb. 1986
3. Remedial Investigation Appendices Volume II June, 1986 Revised from Feb. 1986
4. Remedial Investigation Appendices Volume III February, 1986
 - Pages 1 and 2 of 10 Res. Engr Tab Missing
 - Analytical Report Worksheet 7-8-9-10 Missing
 - Pages 1 and 2 of 6 Missing
 - Tab 9 H 1-8 Missing, H 11-19 Missing, Page 1 of 10 Missing
 - Page 3 Worksheet Missing
 - Tab 10 H 1-3 Missing, Page 3-6 of 6 Missing, Page 1-6 Missing
 - Tab 12 Page 2-10 of 10 Missing
5. 1986 Field Investigation and Supplemental Remedial Investigation Report Volume I, December, 1986
6. 1986 Field Investigation and Supplemental Remedial Investigation Report Volume II, Appendices, December 1986
7. 1986 Field Investigation Hydrology Report, December 19, 1986
8. Feasibility Study Report, March 1987
9. Feasibility Study Report, March 1987
10. French Limited Site Focused Feasibility Study, May 1987
11. Endangerment Assessment Report February 1987
12. Endangerment Assessment Report April 1987
13. Endangerment Assessment Report April 1987
14. In Situ Biodegradation Demonstration Report Volume I Executive Summary October, 1987 (Revised 12-15-87)
15. In Situ Biodegradation Demonstration Report Volume II October 30, 1987

16. In Situ Biodegradation Demonstration Supplemental Report French Limited Site
Volume I, November 30, 1987
Missing Supplements to 5-6 and 7 to 10
17. In Situ Biodegradation Demonstration Supplemental Report French Limited Site
Volume II, November 30, 1987 + Appendices
18. In Situ Biodegradation Demonstration Supplemental Report French Limited Site
Volume III, November 30, 1987 + Appendices
19. In Situ Biodegradation Demonstration Supplemental Report French Limited Site
Volume IV, November 30, 1987 -Appendices
20. In Situ Biodegradation Demonstration Supplemental Report French Limited Site
Volume V - Appendices, November 30, 1987
21. Results of the French Limited Task Group Survey (Goldman and Company)
April 1987
22. Goldman Public Relations Clipping Report
23. Consent Decree between the Federal Government and the FLTG
24. Consent Decree between the Federal Government and the FLTG
25. Laboratory Evaluation of Biodegradation at the French Limited Site, December
1986.
26. Field Evaluation of Biodegradation at the French Limited Site (Phase II) Volume I,
March, 1987
27. Bioremediation Facilities Design Report Volume II of IV Appendices, Reports and
Calculations March 20, 1991
28. Bioremediation Facilities Design Report Volume III of IV Appendix E - Design
Specifications March 20, 1991
29. Bioremediation Facilities Design Report Volume IV of IV Air Monitoring, March
20, 1991
30. Remedial Action Plan Volume I, September 28, 1990
31. Remedial Action Plan Volume II - Quality Assurance, Revised June 3, 1991

32. Remedial Action Plan Volume II - Appendix A - Quality Assurance Sampling Procedures and Appendix B - Analytical Methods - B.1 - B.53, September 28, 1990
33. Remedial Action Plan Volume III - Health and Safety, July 20, 1990
34. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990
35. Remedial Action Plan Volume V - Shallow Aquifer and Subsoil Remediation Process Design, July 20, 1990
36. Hydrogeologic Characterization Report, March 1989
37. Hydrogeologic Characterization Report Appendices, March 1989
38. Supplemental Biodegradation Equipment Evaluation French Limited Site - Phase IV, September 26, 1988
39. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume I, February 1, 1990
40. 1988 Equipment Evaluation Phase IV Report French Limited Site: Volume II, February 1, 1990
41. Site Safety and Health Plan French Limited Site - Phase III, April 1987 (Revision 2)
42. San Jacinto River May 19, 1989 Flood Event Report, June 1989
43. Post San Jacinto River May 1989 Flood Event Soils and Water Analysis Program Volume I, August 16, 1989
44. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume II, Appendix A
45. Post San Jacinto River 1989 Flood Event Soil and Water Analysis Program Volume III, Appendix A, August 16, 1989
46. 1988 Slough Investigation Report French Limited Site, October 1988
47. Flood and Migration Control Wall Design Report, August 16, 1989

48. Flood and Migration Control Wall Design Report (Flood is spelled incorrectly on Volume Cover) + Appendix C - Access way Design September 1989
49. Installation Report for Flood and Migration Control Wall January 8, 1990
50. Installation Report for Flood and Migration Control Wall
Appendix A - ENSR Site Logs
51. Installation Report for Flood and Migration Control Wall
Appendix B - Inspection Reports
52. Installation Report for Flood and Migration Control Wall
Appendix C - Pile Driving Inspection Report January 8, 1990
53. Flood Wall Gate Test Report French Limited Site, February 1990
54. North Pit Remediation Report French Limited Site, November 6, 1989
55. Workplan for the Shallow Aquifer Pumping Tests for the French Limited Site, July 22, 1988
(Additional Title - Pumping Test Program for Shallow Alluvial Aquifer Zone)
56. French Limited Site Hurricane Gilbert Preparation Report October, 1988
57. Riverdale Lake Area Remediation Program, August 15, 1989
58. Addendum to Quality Assurance Project Plan for the French Limited Site In Situ Biodegradation Demonstration Phase III, February 16, 1990
59. Potable Water Well Installation Report French Limited Site, December 7, 1988
60. Bioresidue Fixation Alternatives Evaluation Report French Limited Site
March 20, 1989
61. Ambient Air Impact Risk Assessment Report, May 5, 1989
62. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume I of III -
Summary Report and Appendices A-H, July 1991
63. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume II of III -
Appendices I-M, June 1991
64. Shallow Aquifer and Subsoil Remediation Facilities Design Report Volume III of III
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65. French Ltd. Remediation Design Report Executive Summary
Bioremediation Shallow Aquifer July 1991
66. BioGEE International, Inc., Project Report Biotreatability Study Using Isolated
Indigenous Organisms, April 15, 1994
67. Black EPA Binder
68. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 1, Report,
Appendices A-E
69. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 2,
Appendix F
70. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 3
Appendix F continued
71. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 4,
Appendix G
72. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 5,
Appendix H
73. CH2M Hill, Cell E Verification Remediation Report, May 1993, Volume 6,
Appendix H continued
74. Equipment Evaluation Phase IV Report November, 1987 Monthly Report
75. Equipment Evaluation Phase IV Report December, 1987 Monthly Report
76. Microfiche Field Reports 1988 -small box
77. Annual Groundwater Monitoring Report, December 1993, Report and
Appendices A-B
78. Annual Groundwater Monitoring Report, December 1993,
Appendices C-H
79. DNAPL Study Remedial Alternative Selection and Feasibility Study Report,
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80. Cell E and Cell D/F Remediation Verification Report
81. French Limited Wetlands Mitigation, Final Site Restoration Plan

82. French Limited Wetlands Mitigation, Site Selection Report
83. French Limited Wetlands Mitigation, 404 and 401 Permit Application, U.S. Army Corps of Engineers, Galveston, TX
84. Quality Assurance Report, February 15, 1993, Report No. QA93003
85. Quality Assurance Report, January 20, 1994, Report No. QA94001
86. Environmental Protection Agency, Region VI, Hazardous Waste Management Division, First Five Year Review (Type Ia), CERCLIS TXD-980514814, December 1994
87. ARCS, French Limited Site 1993, Annual Groundwater Sampling and Comparison Report, CH2M Hill, January, 1995
88. Annual Groundwater Monitoring Report, December, 1994, Report and Appendices A-G
89. Monthly Progress Report, January, 1992
90. Monthly Progress Report, January, 1992, Appendices A-C
91. Monthly Progress Report, January, 1992, Appendices E-F
92. Monthly Progress Report, January, 1992, Appendix G
93. Monthly Progress Report, February, 1992
94. Monthly Progress Report, February, 1992, Appendices A-B
95. Monthly Progress Report, February, 1992, Appendices C 1
96. Monthly Progress Report, February, 1992 Appendices C 2
97. Monthly Progress Report, February, 1992, Appendices D-E
98. Monthly Progress Report, March, 1992
99. Monthly Progress Report, March, 1992, Appendix A
100. Monthly Progress Report, April, 1992
101. Monthly Progress Report, April, 1992, Appendices A-B

- 102. Monthly Progress Report, May, 1992
- 103. Monthly Progress Report, May, 1992, Appendices A-B
- 104. Monthly Progress Report, June, 1992
- 105. Monthly Progress Report, June, 1992, Appendices A-B
- 106. Monthly Progress Report, July, 1992
- 107. Monthly Progress Report, July, 1992, Appendices A-B
- 108. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 1 of 3
- 109. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 2 of 3
- 110. Monthly Progress Report, July, 1992, Appendices B1-B22 Vol. 3 of 3
- 111. Monthly Progress Report, August, 1992
- 112. Monthly Progress Report, August, 1992, Appendices A-B
- 113. Monthly Progress Report, September, 1992
- 114. Monthly Progress Report, September, 1992, Appendices A-B
- 115. Monthly Progress Report, October, 1992
- 116. Monthly Progress Report, October, 1992, Appendices A-B
- 117. Monthly Progress Report, November, 1992
- 118. Monthly Progress Report, November, 1992, Appendices A-B
- 119. Monthly Progress Report, December, 1992
- 120. Monthly Progress Report, December, 1992, Appendices A-B
- 121. Monthly Progress Report, January, 1993
- 122. Monthly Progress Report, February, 1993
- 123. Monthly Progress Report, March, 1993

- 124. Monthly Progress Report, April, 1993
- 125. Monthly Progress Report, May, 1993
- 126. Monthly Progress Report, June, 1993
- 127. Monthly Progress Report, July, 1993
- 128. Monthly Progress Report, August, 1993
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- 133. Monthly Progress Report, January, 1994
- 134. Monthly Progress Report, February, 1994
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- 144. Monthly Progress Report, December, 1994
- 145. Monthly Progress Report, January, 1995

146. Monthly Progress Report, February, 1995

147. Monthly Progress Report, March, 1995

12 Large Brown Folders:

1. Administrative Record Index - 2 folders
Administrative Record 09-26-79 thru 05-29-83
Administrative Record 06-03-83 thru 11-28-83
Administrative Record 02-28-84
Administrative Record 03-09-84
Technical Comments on Remediation Investigation Report 2-84
Supplemental Investigation - Resource Engr. 1-84
Administrative Record 3-9-84
2. Administrative Record 08-31-84
Administrative Record 10-29-84 thru 01-22-85
French Ltd. Technical and Regulatory Concepts for In-Place Closure, 09-84
Supplementary Investigation, May 1984
French Ltd. Field Activities Work Plan, February 1985
Supplementary Investigation Attachments, May 1985
3. Administrative Record 02-04-85
Remedial Investigation, Vol. I Report, April 1985
Remedial Investigation, Vol. II Appendices, April 1985
4. Administrative Record 04-08-85 thru 11-26-85
Administrative Record 02-14-86 thru 04-04-86
Technical Report for Resource Engineering, 12-03-85
Appendix QA Program for French Ltd., 12-18-85
1985 Field Investigation Report Appendices, January, 1986
1985 Field Investigation Report, January, 1986
5. Administrative Record 04-01-86
Remedial Investigation Report Appendices, Vol. II, April, 1986
6. Administrative Record 4-1-86
7. Administrative Record 05-08-86 thru 05-12-86
Administrative Record 06-01-86
Administrative Record 01-05-87
Remedial Investigation Report, June 1986
Laboratory Evaluation of Biodegradation, 12-86

- 1986 Field Investigation Hydrology Report, 12-86
Endangerment Assessment Report, 2-87
8. Feasibility Study, March 1987
 9. Administrative Report 03-11-87 thru 03-25-87
Administrative Report 4-1-87
Administrative Report 4-7-87
In Situ Biodegradation Demonstration Phase III QA Project Plan 3-87
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Proposed In Situ Biodegradation Demonstration French Limited Site Phase III 4-87
 10. Administrative Report 4-15-87 thru 5-1-87
Administrative Report 5-21-87 thru 7-2-87
French Limited Focused Feasibility Study, ERT 5-87
Revised Field Evaluation of Biodegradation at French Site Phase II Vol. I
-Revised 7-10-87
 11. Administrative Report 7-20-87 - 11-23-87
Administrative Report Undated Documents 000122-000134
In Situ Biodegradation Demonstration Report Vol. I Executive Summary 10-87
French Limited Site Work Plan Vol. I Project Activities and Sample Plan
 12. Texas Air Control Board Regulations I thru IX
Standard Exemption List
Application for Permit

During the month of April, the status of both libraries have been reviewed and the above information found to be accurate.

9.0 WETLANDS RESTORATION

9.1 Summary of Activities and Progress

Conducted safety meetings at the start of each work shift; inspected all equipment for safety compliance each shift; used daily lottery ticket safety awareness program.

Updated site work plan based on field progress.

Some dewatering was required after each significant rainfall; generally dry weather allowed good excavation progress.

Continued excavation of flow channels; about 95% complete at end of month.

Completed final grading and applied topsoil in about 50% of the area.

Completed tree planting around the fresh-water ponds.

Bridge construction is 60% complete.

Decreased site security coverage since there has been minimal public contact.

Completed the site re-vegetation plan and secured the necessary tree species.

Initiated the site re-vegetation plan.

Conducted five site tours for interested parties.

Reviewed the project status, progress, and issues with the agency review committee; the agencies are satisfied with site progress.

Uncovered affected soil while excavating a tidal flow channel; the area was secured and the affected soil was sampled and analyzed; the soil did not exhibit any hazardous characteristics, but the reactive sulfide and total petroleum hydrocarbon levels were high,

and the affected soil was classified as a class I, non-hazardous waste; response options are being developed.

9.2 Problem Areas and Solutions

<u>Problem</u>	<u>Solution</u>
Safety awareness	Daily safety meeting; lottery ticket program; frequent equipment inspections.
Excavation in wet, soft areas.	Revise work schedule to allow drainage; pump water on "off" days.
Affected soil in excavation area.	Isolate area; sample and analyze affected soils; relocate tidal channel; review response options with City of Baytown.

9.3 Problems Resolved

<u>Problem</u>	<u>Solution</u>
Trees in excavation area.	Transplant desirable trees to temporary nursery area; treat large trees with nutrients.
Water inflow to site.	Seal culverts; secure sewer lines and stormwater lines; regular pumping.

9.4 Deliverables Submitted

March, 1995, Monthly Report.
Project Refinement Status Report.

9.5 Upcoming Events and Activities

Daily safety program.

Continue civil work on site.

Replace topsoil and vegetate.

Contour site.

Develop response plan for affected soil.

Continue re-vegetation.

Develop forecast of maintenance requirements.